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THE STATES
OF
CENTRAL AMERICA;

THEIR

GEOGRAPHY, TOPOGRAPHY, CLIMATE, POPULATION, RESOURCES,
PRODUCTIONS, COMMERCE, POLITICAL ORGANIZATION,
ABORIGINES, ETC., ETC.,

COMPRISING CHAPTERS ON HONDURAS, SAN SALVADOR, NICARAGUA, COSTA RICA,
GUATEMALA, BELIZE, THE BAY ISLANDS, THE MOSQUITO SHORE,

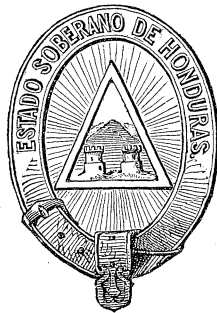
AND THE

HONDURAS INTER-OCEANIC RAILWAY.

BY E. G. SQUIER,

FORMERLY CHARGÉ D'AFFAIRES OF THE UNITED STATES TO THE REPUBLICS OF
CENTRAL AMERICA.

With Numerous Original Maps and Illustrations.



NEW YORK:
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ADVERTISEMENT.

MR. SQUIER'S "Notes on Central America, etc.," which forms the basis of this more extended work, was published in 1855. It was the first successful attempt to present the geographical, political, and general data essential to a just understanding of the actual position and resources of Central America. As such, it was speedily translated into the various languages of Europe, where it was accepted as a standard authority. Nearly all of the ephemeral works which have since appeared relating to Central America, and professing to convey an idea of the country, have drawn their substantial facts from that volume. It was nevertheless circumscribed in its scope, relating principally to the two states of Honduras and San Salvador. The present volume, however, extended to meet the requirements of the times, has nearly double the amount of matter contained in the "Notes," and embraces additional chapters on Nicaragua, Costa Rica, Guatemala, Belize, the Bay Islands, and the Mosquito Shore. It presents a complete view of Central America, under all of its varied aspects, equally setting forth and illustrating its geography, topography, climate, population, resources, commerce, and facilities for inter-oceanic

communication. No man living has had a personal knowledge of the country so extended as the author, and no one has collected so carefully and perseveringly the data bearing upon its present condition or relating to its early history. The publishers therefore submit the work to the world, confident that it will fully meet the public requirement for a full and reliable account of a portion of the continent constantly increasing in interest, and which a series of important events has brought within the circle of modern political and commercial movement.

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GEOGRAPHICAL INTRODUCTION.

IN the year 1850, while occupying the position of diplomatic representative of the United States in Central America, it became requisite for me to visit the Bay of Fonseca, which has a commanding geographical position between the states of Nicaragua and San Salvador, on the Pacific Ocean. During my residence at the port of La Union, my attention was arrested by the circumstance that portions of this bay were swept by strong winds from the north, leading me to infer that there must exist an interruption in the great mountain chain of the Cordilleras, which otherwise would interpose an impassable barrier to the winds blowing from that direction. This inference was strengthened on learning that the north winds prevailed only during the period of their continuance on the Atlantic coast, and was confirmed by the additional circumstance that the current of wind reaching the Pacific was only felt over a very narrow space, not exceeding ten miles in breadth. It was with no surprise, therefore, on ascending the volcano of Conchagua, which rises above the port of La Union, that I turned my glass to the northward, and saw that the mountains of Honduras seemed to be completely interrupted in that direction.

Then, this fact only interested me as a remarkable feature in the general physical character of the country; nor was it until the autumn of 1852 that I was led to reflect upon it in connection with the subject of inter-oceanic communications. At this time the practical examination of the Isthmus of Tehuantepec, with reference to the construction of a railway between the seas, had resulted in establishing the fact of the total absence of adequate ports for the purpose upon both oceans. The project of a communication at that point had, moreover, become involved, politically, to such a degree that little hope could be entertained of its successful prosecution until a new and permanent order of things should be established in Mexico, a result which the previous history of that country gave no warrant for anticipating as likely to happen for many years.

The unwilling conviction was consequently forced upon the pub-

lic mind that, in order to reach California, it would continue to be necessary to follow the tedious and circuitous route by way of the Isthmus of Panama.

It was then that the observations which I had made at La Union induced me to inquire if there might not be a feasible railway route across the continent, terminating on the Bay of Fonseca, in reference to which, and on other grounds, I had ventured the prediction that, "from its position and capacity, it must ultimately become the great emporium of trade and the centre of enterprise upon that side of the continent." I soon found that, as early as 1540, the officers of the Spanish crown had discovered a favorable passage between the seas upon this very line, and that they had founded the city of Comayagua "midway between the oceans" for the purpose of obtaining "an easy communication between the Atlantic and Pacific," by means of which "much sickness, and waste of human life, and many of the fatigues and privations which were experienced in the journey from Nombre de Dios to Panama would be avoided."

On presenting my views upon the subject to a few personal friends and public-spirited gentlemen, it was determined to incur the expense of verifying them by a direct and careful examination of the country in question. I at once proceeded to organize a competent corps of reconnaissance for the purpose, which sailed from the United States in the month of February, 1853, returning in the month of January of the same year. The results of this reconnaissance, as also of a subsequent detailed survey of the line indicated, by competent American and English engineers, are given in the chapters on the "Honduras Inter-oceanic Railway," and need not be repeated here.

It was, however, on the data collected in that reconnaissance, and in conducting the negotiations resulting from it, that the first edition of this work, under the title of "Notes on Central America," etc., was founded. But as that work, after all, was confined almost entirely to the States of Honduras and San Salvador, it could not meet the public requirement, enhanced by a series of startling events in Nicaragua, for an accurate and comprehensive account of Central America as a whole. To meet that requirement, I have not only carefully revised the original work, but added to it chapters on Nicaragua, Costa Rica, Guatemala, Belize, the Bay Islands, and the Mosquito Shore, increasing the bulk of the volume from less than four hundred to upward of seven hundred pages, not to mention the addition of numerous illustrations, which serve better than any de-

scription to convey a clear idea of the scenery of the country and the architecture of its people. It will not, probably, be regarded as arrogant, to claim that the essential facts connected with the geography, topography, population, climate, productions, resources, and commerce of Central America are here presented with sufficient fullness for all general or necessary purposes. The difficulties which I have encountered in collecting them can not, however, be adequately appreciated by the general reader; indeed, for the most part, and wholly as regards Honduras, San Salvador, Nicaragua, the Bay Islands, and the Mosquito Shore, I have been obliged to depend upon my own observations. The undertaking has been, I had almost said, a creation, inasmuch as there are few authorities or accredited sources of information upon which to proceed, or which might serve as a nucleus for an aggregation of facts. The former condition of Central America, under the jealous and exclusive colonial system of Spain, and the distracting and deplorable circumstances under which it has suffered since its independence, have been eminently unfavorable for every kind of local research, whether in the departments of geography or general statistics. Upon all subjects connected with the history, the natural features and resources, climate, population, productions, trade, and resources of the country, there exists a profound and almost universal ignorance. Even the persons supposed to be best informed upon these subjects are seldom able to give any comprehensive series of facts, or of accurate observations bearing upon any one of them, and the inquirer is left to a laborious process of accumulation, which is alike difficult and discouraging. He looks in vain for printed books or public documents to assist him. Of the few which have made their appearance, there nowhere exists a complete collection; and it is equally vain to seek for data among the state and local archives, where, to an original total lack of order, gross neglect and wanton destruction have been superadded, to confound and defeat all investigation.

Humboldt, when attempting to construct a map of New Spain, remarked the entire insufficiency and inaccuracy of all the published maps of that country. Not only were important places wrongly located, but topographical features, chains of mountains, and large rivers were laid down where none existed, while others which really did exist were entirely left out. "Most of the American maps executed in Europe," he observed, "are filled with names which are unknown in the country itself. These errors are perpetuated, and it often becomes exceedingly difficult to conjecture their origin."

Mexico was comparatively much better known than Central America, and if the early maps of the former country were wrong, those of the latter can only be characterized as geographically absurd. Even in later times, although the coasts have been defined with great accuracy, the interior geography has remained as obscure as it was a hundred years ago. The latest maps, some of which are sufficiently pretentious, are for the most part conjectural, and the geographical features which they indicate are wholly inapplicable to the country which they profess to represent. The mention here of an instance, illustrative of the scanty knowledge which the world has hitherto possessed of Central America, may not be inappropriate. Notwithstanding the project of opening a communication between the Atlantic and Pacific Oceans, through Nicaragua, had been discussed for three hundred years, yet, up to the publication of my map of that state in 1851, a chain of high mountains was represented in every engraved map which had fallen under my notice as intervening between Lake Managua and the Pacific. The city of Leon was represented either as situated on a mountain or surrounded by mountains; and in all speculations on the subject of an inter-oceanic canal, a river flowing into the sea at or near the port of Realejo, and called "Rio Tosta," was constantly referred to as probably affording some facilities for the purpose; yet there are no mountains between the northern extremity of Lake Managua and the ocean; the city of Leon stands in the centre of a vast plain; and there is no such stream as the "Rio Tosta" known. And even in the map of Mr. Baily, published in London in 1851, an uninterrupted chain of mountains is represented as extending from Lake Managua to the Gulf of Fonseca, whereas there is no such chain, nor are there any mountains, except a series of volcanic cones, entirely detached from each other, rising from the plain. This error is the more surprising, as Mr. Baily was employed by General Morazan, President of the Old Federation of Central America, to make a reconnaissance of the Isthmus of Nicaragua with reference to the projected ship-canal.

Again: the city of Comayagua, the capital of Honduras, which was a large and flourishing town before Hudson discovered the Bay of New York, seldom varies less than a degree from its true latitude and longitude, and in many maps it still bears the name of Valladolid, which fell into disuse nearly one hundred and fifty years ago! The city of Tegucigalpa, the first in Honduras in point of population, has a position still more variable than Comayagua.

There is another great source of annoyance to travelers in Central America, which is the stereotyped recurrence of the names of places in the maps, which, if they ever existed, are now unknown, or which are mere hamlets, unworthy of a place except in maps of great detail, while really important places do not appear at all. We thus see the town of Tambla, in Honduras, laid down in most maps of the country, while Las Piedras and the Villa de San Antonio, which exist in the same plain, do not appear. Yet Tambla is a petty village of some 200 inhabitants, while Las Piedras has upward of 6000, and San Antonio more than 2500! Again: in the Department of Gracias, in the same state, Guancapla, a collection of a few huts, is conspicuously indicated, while the large and flourishing town of Santa Rosa, containing some 6000 inhabitants, is entirely omitted.

These examples might be multiplied indefinitely; but they are errors consequent on the limited information which the world has hitherto possessed of these countries. Map-makers, destitute of requisite accurate data, have been obliged to copy the works of their predecessors, and thus contribute to the perpetuation of their errors. That they have done this, with little or no care to test the accuracy of what they have copied, can also be excused on the ground that hitherto these countries have not had sufficient interest to make accuracy a matter of any practical importance. Now, however, the case is widely different: not only is the value of Central America, in every point of view, beginning to be appreciated, but the enterprise of the world is taking that direction in a full and increasing current.

The distinguished Prussian geographer, Berghaus, was the first to indicate, with even approximate accuracy, the great physical features of Central America. Instead of admitting a continuous chain of mountains extending through that country from Tehuantepec to Panama, he divided the mountains of Central America into three distinct systems or groups: first, that of Costa Rica, with the volcano of Cartago for a nucleus; second, that of Honduras; and, third, that of Guatemala. Between the first and second intervenes the transverse basin of the Nicaragua lakes, with a minimum altitude of land of one hundred and eighty feet; and between the second and third the plain of Comayagua, with its dependent valleys, having a maximum altitude of but little more than two thousand feet. Under this view, and in all general respects, Berghaus's Map of Central America, published in his "*Physikalischen Atlas*" in 1840, has been,

up to within a very recent period, far the best representation of the geography of that country.

In explanation of the map of Honduras and San Salvador which is herewith presented to the public, it is proper to say that the leading points upon the line of the proposed railway through Honduras were determined from numerous and careful astronomical observations. They constitute the basis upon which the relations of most of the remaining places were calculated. These calculations are entitled to additional confidence, from the circumstance that there are, both in Honduras and San Salvador, a number of elevated and commanding mountain and volcanic peaks, which are almost constantly kept in view by the traveler, and which always enable him to determine his position with considerable accuracy. The bearings of these determinate points were never neglected when an opportunity occurred for observing them, and have served a most useful and satisfactory purpose in the construction of this map. It will be remarked that those places, of which the position is regarded as having been fixed with approximate accuracy, are indicated by a light line drawn under them. All others are inserted on the best information that could be obtained, and in a few instances conjecturally. The course of the Rio Patuca, and the relative positions of the towns situated on its upper waters, are on the authority of a map of the Departments of Yoro and Olancho, published by Mr. W. V. Wells, in his "Adventures and Explorations in Honduras." Much of the information embodied in that portion of the map embraced within the boundaries of the Department of Gracias, Honduras, is drawn from a MS. map of that department, constructed in 1838 by Don José Maria Cacho, late Secretary of State of Honduras, and at that period Commissioner of the Census then ordered by the Congress of the old republic.

I may here observe that little reliance can be placed upon the "Itinerários" which are appended to the various "Calendários" published in Central America in respect of distances. The computations are in leagues, and have been obtained chiefly from the professional *arrieros*, or muleteers of the country, whose estimates of distances are very loose, depending, as they often naïvely confess, "upon the qualities of their mules." I have found that the value of a league, in the comparatively level grounds of San Salvador and in the plains of Honduras, seldom exceeds two English miles; while, in the broken and mountainous districts, it falls below a mile and a half of horizontal distance.

What I have said of the geographical data embraced in this memoir, and in the accompanying maps, is equally true of the general statistics and facts which are here presented. They have been chiefly obtained from direct observation and laborious personal inquiry, in a detached and often obscure form, and are necessarily imperfect. For instance, the facts relating to population have been collected from an inspection of the parochial registers in some instances, and from tables published irregularly and without digestion in the "Gacetas Officials" of the respective states. Few, who have not undertaken a similar task, can adequately comprehend how great an amount of labor is requisite to arrive at results under such adverse circumstances, and how unsatisfactory these results will often prove to be, even after every effort has been exhausted to render them complete and accurate. No one can be more sensible of the defects of this volume, and its deficiencies in respect to several important subjects of inquiry and interest, than myself. Still, I flatter myself that it will prove of value, as constituting a point of departure for other investigators, who, by correcting its errors and gradually supplying its omissions, shall finally complete the design of presenting to the world a full and accurate view of the character, climate, resources, population, and general physical and political condition of the various divisions of Central America; and I am not without the hope that this attempt may have an influence in awakening the attention of the people and governments of that country to the importance of collecting, digesting, and making public the data bearing upon all these subjects.

I am not aware of more than one work which has been printed in Central America that even professed to give a general view of the country, its character, and resources, viz., *The History of the Kingdom of Guatemala*, by Juarros. This work, however, is chiefly historical, and is little more than a transcript from the municipal and monkish chronicles of Guatemala. Reference is rarely made to the physical features of the country, and even then in an exaggerated and marveling tone, which always denotes the absence of positive knowledge. Such stories as the production of "a plant like a gourd" from sowing the eggs of an insect known as the *Chapulín*, are not too absurd to find a grave relation in the history of Juarros. Yet, strange to say, nearly all that has been written or published in Central America upon the country itself has been a servile repetition, seldom even varying in language, of the statements and speculations of Juarros!

Subsequently to the independence, Don José de la Valle, and after him Don Alejandro Marure, devoted some attention to the study of the country under its physical aspects, and to the collection of facts illustrative of its resources and political condition ; but, except a memoir on the proposed ship-canal of Nicaragua, and a brief chronological list of events in the history of Central America, we have nothing on these subjects from the pen of Marure, although it is said that, in common with Valle, he wrote largely upon them all. It only remains to mention the name of Don José Maria Cacho to complete the list of natives of Central America who have done any thing worthy of mention in the department here indicated. His brief notes on the Department of Gracias, in Honduras, possess a real value, and might serve as a model of similar researches to his countrymen.

What little illustration Central America has received has therefore been at the hands of foreigners ; but their works have been, for the most part, rapid narrations of travel and adventure, shallow in observation, and inaccurate in their statements. Few of them have been written by persons competent by education, or accustomed by habit to close and accurate research. They are chiefly devoted to superficial views of society, and highly-colored accounts of political incidents and commotions, of which their authors failed to ascertain the origin not less than to detect the significance. From this, perhaps, too sweeping condemnation, I may except portions of the works of Thompson, Henderson, Young, Roberts, Dunn, Baily, and Crowe, which certainly contain many and valuable facts and observations.

Upon a review of the whole subject, I have thought that I might render the public a service in subjoining, in the Appendix to this work, a list of the various books and pamphlets bearing directly upon Central America as a whole, or upon its various parts, which have been published since the commencement of this century, and which have fallen under my observation. My object has been to make this list as complete as possible, without regard to the values of the various works themselves. It will be observed that the titles follow each other in chronological order.

N O T E S

ON

C E N T R A L A M E R I C A.

CHAPTER I.

GEOGRAPHICAL AND TOPOGRAPHICAL FEATURES OF CENTRAL AMERICA, AND THEIR INFLUENCE ON POPULATION.

CENTRAL AMERICA, in respect of geographical position, almost realizes the ancient idea of the centre of the world. Not only does it connect the two grand divisions of the American continent, the northern and the southern hemispheres, but its ports open to Europe and Africa on the east, and to Polynesia, Asia, and Australia on the west.

Looking at the map, we find, at the Isthmus of Tehuantepec, the Gulf of Mexico approaching to within two hundred miles of the Western Ocean, the waters of the River Coatzacoalcos, which flows into the former, almost interlocking with those of the Chicapa, flowing into the latter. Below this point the continent widens, embracing the high table-lands of Guatemala upon the west, and the broad plains of Tabasco, Chiapa, and Yucatan upon the north and east. The Gulf or Bay of Honduras, however, closes around this section upon the southeast, and again narrows the continent to less than one hundred and fifty miles. The country intervening between this bay and the Pacific is

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marked by a complete interruption of the Cordilleras, and is traversed by a great transverse valley, running due north and south, through which the large river Ulua finds its way to the Atlantic, and the smaller river Goascoran flows into the Bay of Fonseca, on the Pacific. Still lower down, and passing the grand transverse basin of Nicaragua, is the well-known narrow Isthmus of Panama or Darien, over which the tide of emigration has twice poured its floods, once upon Peru, and again upon the glittering shores of California.

Nor are the topographical characteristics of Central America less remarkable than its geographical features. In its physical aspect and configuration of surface, it has very justly been observed that it is an epitome of all other countries and climates of the globe. High mountain ranges, isolated volcanic peaks, elevated table-lands, deep valleys, broad and fertile plains, and extensive alluvions, are here found grouped together, relieved by large and beautiful lakes and majestic rivers; the whole teeming with animal and vegetable life, and possessing every variety of climate, from torrid heats to the cool and bracing temperature of eternal spring.

The great chain of the Cordilleras here, as in South America, runs nearest to the Pacific coast, but in places it is interrupted, as I have already said, and assumes the form of detached ranges and isolated elevations, groups or knots of hills, between which the streams from the interior high valleys or elevated plains wind their way to the two oceans. As a consequence, the principal alluvions border on the Gulf of Mexico and the Caribbean Sea. Here rains fall, in greater or less abundance, for the entire year; vegetation is rank, and the climate is damp and proportionally insalubrious. The trade winds blow from the northeast; and the

moisture with which they are saturated, condensed on the elevated parts of the continent, flows down toward the Atlantic. The Pacific slope is therefore comparatively dry and healthful, as are also the elevated regions of the interior.

Topographically, Central America presents three marked centres of elevation, which have, to a certain degree, fixed its political divisions. The first is the great plain, or broken table-land, in which is situated the city of Guatemala, and which is upward of four thousand feet above the sea. Here the large rivers Usumasinta and Tabasco, flowing northward through Chiapa and Tabasco into the Gulf of Mexico, take their rise. Their sources interlock with those of the Motagua or Gualan, running eastward into the Gulf of Honduras, and with those of the small streams which send their waters westward into the Pacific.

A group of mountains occupies Honduras, presenting an almost mural front toward the Pacific, but shooting out numerous spurs or subordinate branches, like the fingers of an outspread hand, toward the north and east. Between these ranges, and in some cases almost encircled by hills, are several broad valleys or plains of different elevations, in which are gathered the waters of thousands of rivulets and small streams, forming numerous considerable rivers, which radiate north and east into the Caribbean Sea, and south and west into the Southern Ocean. Among the most remarkable are the Chamelicon, the Ulua, Lean, Roman or Tinto, Patuca, Coco (Wanks or Segovia), upon the eastern slope; the Choluteca, Nacaome, Goascoran, San Miguel, and Lempa, upon the western.

Intervening between this and the third great centre of elevation in Costa Rica is the basin of the Nicara-

guan lakes, with its verdant slopes and gently undulating plains. The nucleus of the elevation in Costa Rica is the great volcano of Cartago, which towers in its midst. Here the Cordilleras assume their general character of a great, unbroken mountain barrier, but soon subside again in low ridges on the Isthmus of Panama.

Besides the rivers of Central America, the largest of which I have enumerated, there are a number of large and beautiful lakes, viz.: Nicaragua and Managua, in Nicaragua; Yojoa or Taulebé, in Honduras; Guija and Ilopango, in San Salvador; and Golfo Dulce, Peten or Itza, Atitlan, and Amatitlan, in Guatemala. Of these, the Lakes of Nicaragua and Managua are much the largest.

I have said that the ports of Central America open to Europe and Africa on one hand, and to Polynesia, Asia, and Australia on the other. On the Atlantic, Guatemala has Belize, Izabal, and Santo Tomas (the last only of much value); Honduras has Omoa, Puerto Caballos, Puerto Sal, Triunfo de la Cruz, Truxillo, and others; Nicaragua has Gracias á Dios, Bluefields, and San Juan. Costa Rica has no good port on the east, but has several on the west, of which Golfo Dulce, Punta Arenas, and Caldera are the principal. Nicaragua has, upon the Pacific, Culebra, Salinas, San Juan del Sur, and Realejo; Honduras, a cluster in the Bay of Fonseca, viz.: Amapala (a free port), San Lorenzo, and La Paz; San Salvador has La Union, also in the Bay of Fonseca, Jiquilisco or Espiritu Santo, Jaltepec or Concordia, La Libertad, and Acajutla or Sonsonate. The last two can hardly be called ports, being, in fact, only roadsteads. Guatemala has but one port or roadstead, Iztapa, lately named San José. The best of all these ports on the Atlantic are

Santo Tomas, Omoa, Puerto Caballos, and San Juan del Norte; on the Pacific, Realejo, the free port of Amapala (Island of Tigre), and La Union.

The area of Central America may be calculated, in round numbers, at 165,000 square miles—very nearly equal to that of the New England and the Middle States combined. The population may be estimated at not far from 2,000,000, of which Guatemala has 850,000; San Salvador, 433,000; Honduras, 350,000; Nicaragua, 300,000; and Costa Rica, 135,000.

The geographical and topographical features of all countries have had, and always must have, an important and often a controlling influence upon the character and destiny of their populations. The nature and extent of this influence receives a striking illustration both in the past and the present condition of Central America. At the period of the discovery, it was found in the occupation of two families of men, presenting in respect to each other the strongest points of contrast. Upon the high plateaus of the interior of the country, and upon the Pacific declivity of the continent, where the rains are comparatively light, the country open, and the climate relatively cool and salubrious, were found great and populous communities, far advanced in civilization, and maintaining a systematized religious and civil organization. Upon the Atlantic declivity, on the other hand, among dense forests, nourished by constant rains into rank vigor, on low coasts, where marshes and lagoons, sweltering under a fierce sun, generated deadly miasmatic damps, were found savage tribes of men, without fixed abodes, living upon the natural fruits of the earth, and the precarious supplies of fishing and the chase, without religion, and with scarcely a semblance of social or political establishments.

It is impossible to resist the conviction that the contrasting conditions of these two great families were principally due to the equally contrasting physical conditions of their respective countries. With the primitive dwellers on the Atlantic declivity of Central America, no considerable advance, beyond the rudest habits of life, was possible. He was powerless against the exuberant vitality of savage nature, which even the civilized man, with all the appliances that intelligence has gradually called to his aid, is unable to subdue, and which still retains its ancient dominion over the broad alluvions, both of Central and South America. His means of sustenance were too few and too precarious to admit of his making permanent establishments, which, in turn, would involve an adjustment of the relations of men and the organization of society. He was therefore a hunter from necessity, nomadic in his habits, and obliged to dispute his life with men who, like himself, were scarcely less savage than the beasts of the forests.

Civilization could never have been developed under such adverse conditions. It can only originate where favorable physical circumstances afford to man some relief from the pressure of immediate and ever-recurring wants—where a genial climate, and an easily-cultivated soil, bountiful in indigenous fruits, enables him not only to make his permanent abode, but to devote a portion of his time to the improvement of his superior nature.

Such were the circumstances which surrounded the dweller on the high plains of Honduras and Guatemala. There, wide and fertile savannas invited to agriculture, and yielded to the rudest implements of cultivation an ample harvest. The maize, that great

support of aboriginal civilization in America, was probably indigenous there, and was thence carried northward over Mexico and the Floridas by the various families who established themselves in those regions, and whose languages and traditions point to the plateaus of Guatemala as their original seat.

The natural conditions which favored the development of mankind in one portion of Central America, and rigidly suppressed it in another, are still active and potential. The Spaniards stopped not to maintain an unequal struggle against savage nature on the Atlantic slope of the continent, but established themselves upon the dryer, more salubrious, and more genial Pacific declivity. The Mosquito Shore still remains the haunt of savages, whom three hundred years of contact with civilization have failed to improve; while the State of San Salvador sustains a population twice as great in proportion to its area as any other equal extent of Spanish America, and relatively as great as that of New England itself.

These natural conditions will continue to foster settlement and population on the one hand, and discourage and oppose it on the other; and not until those portions of Central and South America which are most favored in respect of position and climate are filled to overflowing, and the progress of discovery, both in science and in art, has endowed men with increased ability to combat successfully the diseases and physical difficulties which exist in the valleys of the Amazon and Orinoco, and on the Mosquito Shore, will those regions be subjected to the influences of civilization, or become the seats of any considerable populations.

The natural relations of Central America, as indicated by the physical facts already pointed out, are

clearly with the Pacific and the states which now exist or may spring into existence upon that coast. To California and the greater part of Mexico, as also to some of the states of South America, it must come, sooner or later, to sustain a position corresponding with that which the West Indies have held toward the United States and Europe, with the important addition of being an established route of travel, and perhaps ultimately of commerce, between the eastern and western hemispheres. Its destiny is plainly written in the outlines of its coast, and is printed on its surface, not less than demonstrated by its geographical position.

CHAPTER II.

OBSERVATIONS ON THE CLIMATE OF CENTRAL AMERICA IN
GENERAL.

THE peculiarities of Central America, in respect of configuration of surface, will explain the almost endless variety of climate to which I have alluded, and which is nowhere more remarkable than in that country. Situated between 8° and 17° north latitude, were it not for these features, the general temperature would be somewhat higher than that of the West Indies. As it is, the climate of the coast is nearly the same with that of the islands alluded to, and exceedingly uniform. It is modified somewhat by the shape and position of the shore, and by the proximity of the mountains, as well as by the prevailing winds. The heat on the Pacific coast is not, however, so oppressive as on the Atlantic; less, perhaps, because of any considerable difference of temperature than on account of the greater dryness and purity of the atmosphere.

In the northern part of the State of Guatemala, in what is called "Los Altos," the Highlands, the average temperature is lower than in any other part of the country. Snow sometimes falls in the vicinity of Quetzaltenango, the capital of this department, as well as on the high plains of Intibucat in Honduras, but soon disappears, as the thermometer seldom remains at the freezing point for any considerable length of time. In the vicinity of the city of Guatemala, the range of the thermometer is from 55° to 80° , averaging about 72° of Fahrenheit. Vera Paz, the northeastern department

of Guatemala, and embracing the coast below Yucatan to the Gulf of Dulce, is nearly ten degrees warmer. This coast, from Belize downward to Izabal and Santo Tomas, is hot and unhealthy. The same remark applies, in a less degree, to the northern and eastern coast of Honduras, from Omoa to Cape Gracias á Dios. A favorable circumstance here is the close approach of the mountains to the shore, and the prevalence, for a considerable portion of the year, of cool and bracing winds from the north. The State of San Salvador lies wholly on the Pacific. It is smaller than any of the others, but proportionally better populated. It is less elevated than either Guatemala or Honduras, and its general temperature is probably higher. The heat, however, is never oppressive, except at a few points near the coast, as for instance Sonsonate, San Miguel, and La Union, all of which owe their excessively high temperature to local circumstances. Honduras, as its name implies (being the plural of "*hondura*," depth), has a very diversified surface, and a consequent diversity of temperature. The climate is generally delightful, the average temperature at Tegucigalpa, Comayagua, Juti-calpa, and Gracias, the principal towns, being about 74°. The Department of Segovia, in Nicaragua, bordering on Honduras, has a like surface and temperature. The principal part of Nicaragua, however, is widely different in all respects, and has a topography and climate peculiarly its own. The average temperature of the great basin of the lakes is about 79° or 80°: a result due not to its elevation, but to other favorable and modifying causes, which I have fully pointed out in my work on that country. The population of Costa Rica is concentrated on the western or Pacific slope of the volcano of Cartago, and, as a consequence, almost

any degree of temperature may be obtained, according to the elevation, from the intense heat of the port of Punta Arenas to the constant spring of San José, or to the autumnal temperature of the belt around the ancient capital of Cartago. The eastern slopes of Costa Rica may be said to be uninhabited, and the coast from Chiriqui Lagoon northward is low and unhealthy. Indeed, the entire Atlantic coast of Central America, from Truxillo southward, embracing the whole of what is called the Mosquito shore, is subject to the same remark. Hence this coast has scarcely any inhabitants, except a few squalid Indians, while the coast of the Pacific is lined with towns, and occupied by a very considerable population.

What are called the "seasons" under the tropics, namely, the wet and dry, are much influenced in their commencement and duration by local causes, so that what is literally true of one place can only be partially so of another. The widest differences are, of course, between the Atlantic and Pacific slopes of the continent. The whole of Central America comes within the zone of the northeast trade winds, which, sweeping across the Atlantic, reach the continent almost saturated with vapor. The portion of moisture of which they are deprived by the Caribbean Islands is probably again nearly, if not quite, made up in their passage over the sea of the same name. These winds are intercepted by the high mountain centres of Guatemala, Honduras, and Costa Rica, and the vapor precipitated from them flows down to the Atlantic, through a multitude of streams and rivers. But the mountains of Central America are not all high enough to entirely intercept the trade winds. They are, moreover, broken through by transverse valleys, like that of the Nic-

araguan Lakes, and that of Comayagua in Honduras. As a consequence, the trades, for a greater part of the year, blow entirely across the continent, reaching the Pacific slope deprived of their moisture, and cooled by a passage over the elevated region of the interior. Hence result the greater salubrity of that declivity, the comparative coolness and dryness of its climate, and its consequent greater population. For about four months of the year, from May to October, the trades being intermittent, the Pacific declivity is subject to winds from the west and southwest, which precipitate their waters against the western slopes of the mountains, and constitute the rainy season. As these Pacific winds are seldom more than exaggerated sea-breezes, and are rarely of more than a few hours' continuance, the rains which follow from them are brief, occurring generally in the afternoon and night. It is rare to witness an entire day of rain, although there are occasionally meteoric combinations which produce what the Spaniards call *Temporales*, or rains of several days' continuance. During a residence of three rainy seasons in Central America, I witnessed but one *Temporal*.

Speaking generally, the dry season, or summer, may be said to commence, on the coasts, in December, and terminate in June; the remaining months constituting the rainy season, or winter. But the dry season has really a duration of but about three months—February, March, and April; the rainy season an equal number—July, August, and September. Between these periods the rains are intermittent, alternating with days and sometimes weeks of dry weather.

On both coasts heavy dews fall during the night, so that vegetation is always profuse and beautiful. But on the more elevated central plateaus, where the alti-

tude exceeds 3000 feet, the dews are slight, and the nights are as dry as the days. As a consequence, some of these districts at certain periods seem arid and burned, and never enjoy that luxuriance of vegetation which constitutes equally the beauty and danger of the seaboard.

Although the rains, especially those which, at the epochs of change in the seasons, fall in showers, are much heavier than those which prevail in the United States and in Europe, so that in a few minutes the earth is covered with water, yet they do not generally last more than half an hour. They cease as suddenly as they begin; the sky as suddenly recovers its serenity, the sun comes out unclouded, dispersing the humidity, and in a brief space the earth becomes, to all appearance, as dry as if no rain had fallen.

What I have said applies strictly to the respective Atlantic and Pacific coasts. The central plateaus, or high table-lands of the interior, have a climate of their own, subject neither to heavy rains nor excessive droughts. The winds which reach them, as well from the west as the east, are first deprived of the greater part of their moisture, but both bring with them more or less rain. From the circumstance that they lie nearest the Pacific, these plateaus partake most of the climate of that coast, with which their seasons also measurably coincide. The plain of Comayagua, situated in the very centre of Honduras, and equidistant from the two great seas, may be taken as an illustration. More or less rain falls there during every month in the year; but, during the prevalence of the dry season on the Pacific, it is only in the form of showers of brief duration, while during the wet season the rains are comparatively long and heavy. Continuous rains, or *Temporales*, are unknown.

There is another circumstance, not often considered, which contributes to make the heat of the day in this intertropical region more endurable than that of certain periods of the year in more elevated latitudes, and that circumstance is the difference in the length of the days. In the latitude of New York, the longest days of the year are 15 hours 16 min.; the shortest nights are 8 hours 44 min. In the latitude of Honduras, the longest days of the year are 12 hours 40 min.; the shortest nights 11 hours 20 min. The sun, then, during the solstice of summer, is above the horizon of New York 2 hours 36 minutes longer than in Honduras; and it is precisely during this period that the sun is nearest our zenith, while in Honduras, during the longest days, the sun is past the zenith. It is clear that this additional exposure to the rays of the sun during its period of greatest force must have a very sensible effect on the temperature, and render the heat greater and less supportable than it would be were its action limited to a fewer number of hours.

These general remarks will be found supported by the following data, which comprise about all the information that I have been able to collect on this subject from personal observations or from authentic sources:

Costa Rica.—"The climate of Costa Rica is very humid, the rain falling for six months of the year. It is cool and healthy on the Pacific declivity, excepting the immediate coast; hot, wet, and unhealthy on the Atlantic; cold and salubrious on the table-lands of the interior, where the thermometer ranges from 65° to 75° of Fahr. in the course of the year. It must be observed that the rainy season on the Pacific and in the interior is from April to November; but upon the Atlantic

coast this order of things is reversed, and the rainy season is from November to February.”*

Nicaragua.—Observations were made, during the progress of the survey for a ship-canal in Nicaragua, in 1850–51, by the gentlemen connected with that enterprise. These observations were confined to the isthmus which lies between Lake Nicaragua and the Pacific, at a point where the trade winds, sweeping through the valley of the San Juan River, and over Lake Nicaragua, find no high mountains to precipitate their moisture until they reach the volcanic peaks of Ometepe and Madeira. Hence it happens that this Isthmus of Rivas receives a greater amount of rain annually than any other portion of the Pacific coast of Central America.

OBSERVATIONS AT RIVAS, NICARAGUA—1850–51.

Date.	Average. Thermom.	Highest. Thermom.	Lowest. Thermom.	Range.
	° ' "	° ' "	° ' "	° ' "
September, 1850	78 12	88	71	17
October, do.	77 0	86	70	16
November, do.	78 42	86	74	12
December, do.	77 11	84	72	12
January, 1851	76 40	87	69	18
February, do.	76 0	84	70	14
March, do.	77 0	84	72	12
April, do.	78 83	88	72	16
May, do.	78 29	91	68	23
June, do.	77 12	88	71	17
July, do.	76 98	86	71	15
August, do.	76 20	86	71	15
Sept. 12th, do.	79 10	86	74	12
Total mean . .	77 42	86 45	71 15	15 30

Here it will be observed that the maximum range

* *Bosquejo de la Republica de Costa Rica, etc.*, por Felipe Molina, p. 28. Galindo (*Journal of the Royal Geographical Society of London*, vol. vi., p. 134) observes that the climate of Costa Rica is exceedingly varied, ranging from 50° to 60° of Fahr., according to the elevation.

was in the month of May, and was 23° . The mean range for the year, however, was only 15° . The heat at no time of the year is as great as it is during the summer months in New York. For June, July, and August of 1850, the mean average range of the thermometer at the town of Lansingburg, New York, was $71^{\circ} 5'$, the mean highest $93^{\circ} 66'$, the mean lowest $47^{\circ} 33'$, and the mean range $46^{\circ} 33'$. At Jamaica, Long Island, for July and August of the same year, the mean average was $75^{\circ} 15'$, the mean highest $95^{\circ} 50'$, the mean lowest $61^{\circ} 50'$, and the mean range $43^{\circ} 27'$.

In respect of rain, the principal surveyor has given us the result of careful admeasurements made at Rivas for one year, from September 9th, 1850, to September 25th, 1851. The amount was taken in inches and decimals, and is as follows:

	Inches.			Inches.
September, 1850 . .	7.005	April,	1851 . .	0.430
October, do. . .	17.860	May,	do. . .	9.145
November, do. . .	1.395	June,	do. . .	14.210
December, do. . .	3.210	July,	do. . .	22.640
January, 1851 . .	0.380	August,	do. . .	11.810
February, do. . .	0.000	September, do. . .		13.240
March, do. . .	1.410			
Total inches		102.735		

For the exact year, from September 9th, 1850, to September 9th, 1851, the amount of rain was 97.71 inches. The whole number of days during which rain fell was 139, and the whole number of dry days was 226. During the six months, from May to October inclusive, distinguished as the wet season, the whole fall was 90.89 inches, and during the remaining six months, distinguished as the dry season, only 6.82 inches.

But these observations, as I have said, were made

at Rivas, under the lee of the volcano of Ometepe, where more rain falls than at Granada or Leon, in the northern portion of the state. At Rivas there was but one month, February, in which no rain fell. In 1850, in Leon, no rain fell for three months, from the first of January to the first of April.

The average annual fall of rain and snow in the State of New York, during the ten years preceding 1846, according to the report of the Regents of the University, is 34.14 inches. The greatest fall in any one year during that period was 37.04 inches, and the least 32.10 inches.

Honduras.—The northern and eastern coast of Honduras has unquestionably a higher temperature than any other portion of the state; it however diminishes rapidly as we penetrate inland. The modifying influence of the neighboring mountains is felt even before the increase in altitude becomes perceptible. Her table-lands have, of course, a climate varying with their height above the sea, and their exposure to the prevailing winds. Consequently, there can be no generalization on the subject of the climate of Honduras, except so far as to say that it has a variety adapted to every caprice, and a temperature suitable for the cultivation of the products of every zone.

Among the data on this subject are the observations made by Mr. Thomas Young, at the mouth of Black River, on the Bay of Honduras, lat. 16° N., long. 85° W., for one year (1840–41?). The subjoined remark accompanies the table:

“The climate here is pretty equable, only varying, throughout the year, from 62° to 86° Fahr., so that nothing need be apprehended from excessive heats; especially as, during the greater part of the year, it is

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tempered by the grateful sea-breeze, and sometimes by the invigorating dry north wind.

“When the northers terminate, and the sea-breeze again blows, the effect on the human frame, and indeed on every thing around, is plainly perceptible. All nature partakes of its influence, and few can tell the enjoyment expressed by the man who has been crouching round a fire in a cold wet north as he eagerly rushes out to enjoy the health-giving breeze.”

SUMMARY OF THERMOMETRICAL OBSERVATIONS

Taken daily at Noon, at the mouth of Black River, Honduras, for one Year (1840-41).

Months.	Average Temperature.	Prevailing Winds.*	Prevailing Weather.
January..	62° to 66°	Northers.	Wet: sometimes fine by being a dry north.
February.	66° to 70°	“	“ “ “
March...	70° to 74°	Unsettled sea-breezes and northeasters.	Dry.
April....	74° to 76°	Northeasters and sea-breezes.	“
May.....	78°	Strong sea-breezes.	“
June....	78° to 82°	“ “	“
July.....	82°	“ “	Wet.
August..	84° to 86°	Light variable airs or calms.	Dry.
September	84° to 86°	“ “ “	“
October..	78°	Sea-breezes, sometimes a light north.	Dry or wet, according to wind.
November	72° and less	Northers.	Wet: sometimes fine by being a dry north.
December	62° to 66°	“	Wet.

Other observations were made, in 1844, on the same coast, a little to the eastward of Black River, in the vicinity of Carataska Lagoon, by a competent Prussian commission, Messrs. Müller, Fellechner, and Hesse.

* “At the beginning of October, what are called the *Norths* commence and generally continue, with little variation, till the return of February or March. While these winds last, the mornings and evenings are cold, frequently unpleasantly so; and what in this country is understood by a *wet north*, might perhaps furnish no very imperfect idea of a November day in England. A *dry north*, on the contrary, is beautiful, agreeable, and invigorating.”—*Henderson's Honduras*, p. 14.

They were carried on from June 13th to August 2d of that year, with the following results:

Observations at Carataska Lagoon from June 13th to August 2d, 1844.

6 o'clock A.M.,	26°	of Centigrade=	78.5°	of Fahr.
11 " "	28.4°	"	=83.1°	"
3 " P.M.,	28.5°	"	=83.4°	"
7 " "	27.3°	"	=82°	"

This is equal to an average mean of 27.8° of Cent., 22.24° of Reaum., and 82° of Fahr. During this time the wind blew steadily from the E., E.N.E., or N.E., with the exception of three days (the 22d, 23d, and 24th of June) from the S.W., and one day (July 31st) from the N.W. The extreme range of the thermometer during this period was from the mean minimum of 61° Fahr., July 2d, to the mean maximum of 85° Fahr., July 4th. Captain Haly, for twenty years a resident at Cape Gracias, states that during the coldest months, viz., October, November, and December, the range of the thermometer at that point is from 60° to 65° of Fahr.

At the port of Truxillo, for nearly two months, from May 8th to July 4th, 1856, the average mean of the thermometer at sunrise was 76° 5', at noon 84°, at sunset 80°, with frequent rain during the afternoons and at night.

At the port of Omoa, also on the same coast, and in the same latitude, but three degrees to the westward of Black River, for one week, from the 5th to the 12th of July, 1853, the thermometer had an average of 85° Fahr. at noon; its greatest range, from six o'clock in the morning to the same hour in the evening, having been from 80° to 87°. During this period, the mornings were generally very pleasant, with showers from nine to twelve. The sea-breeze set in between twelve

and one, and from that time until six in the evening it was clear. During the evening and night the land-breeze was accompanied with frequent violent showers.

Proceeding inland to the great transverse plain of Comayagua, elevated 1800 feet above the sea, my observations, made in 1853, gave the following results:

MEAN RANGE OF THERMOMETER AT COMAYAGUA.

Months (1853).	6 A.M.	12 M.	3 P.M.	6 P.M.
April (part) . .	75° 7'	81° 9'	84° 0'	80° 2'
May	75° 5'	81° 2'	80° 3'	78° 5'
June	74° 4'	78° 5'	80° 8'	78° 3'
Average . . .	75° 2'	80° 5'	81° 7'	79° 0'

That is to say, during the above months, the mean temperature, from six o'clock in the morning until the same hour in the evening, was 79° 1'. The highest or maximum point touched by the thermometer during these months was 88°; the lowest or minimum, 68°; an extreme range of 20°. It may be observed here that, from certain peculiarities of the position of the city of Comayagua, its temperature runs higher than that of any other portion of the valley or plain in which it is situated. The temperature of Las Piedras and of San Antonio, distant about fourteen miles, has a mean of from three to five degrees lower. A little place called "El Sitio," not twenty minutes' ride from Comayagua, and not perceptibly higher, has a mean of at least five degrees less.

It should also be borne in mind that, in the interior, the months of April, May, and June are the hottest of the year, and that for the remaining nine months the temperature is considerably lower. November, December, and January are positively cool, and fires sometimes become necessary for comfort.

The remaining direct observations on the tempera-

ture of Honduras, of which we are in possession, are too few and too disconnected to be of much value. The following data, however, may serve to illustrate its variety:

City of Tegucigalpa, 3420 feet elevation, for four days, from April 28 to May 4, 1853, inclusive:

Maximum	85°	Fahr.
Minimum	68°	"
Mean average	77° 5'	"

At the same point, from October 18th, 1854, to November 8th of the same year, the average mean at sunrise was 64°, at noon 76°, and at sunset 71° 5'; the direction of the winds N.N.E. and E., with frequent showers at night.

At Jutecalpa, Department of Olancho, 1100 feet above the sea level, from January 3d, 1855, to the 14th of the same month, the average mean at sunrise was 61° 5', at noon 72° 5' and at sunset 69°.

Guajiquero (Indian town), 5265 feet elevation, May 4th, 1853, six o'clock A. M., 56° Fahr.

Intibucat, 4950 feet elevation, July 4th, 1853, six o'clock A. M., 56°; eleven o'clock A. M., 62°.

City of Gracias, 2520 feet elevation, three days, from July 6th to 8th inclusive:

Maximum	79°	Fahr.
Minimum	70.5°	"
Mean average	74°	"

Sta. Rosa, Department of Gracias, 3400 feet above the sea, for three weeks during the month of July, 1853:

Maximum	75°	Fahr.
Minimum	68°	"
Mean average	71° 15'	"

Guatemala.—The great plain, in which is situated the city of Guatemala, is elevated about 4200 feet

above the sea, and lies within eighty miles of the Pacific. The opposite very complete and valuable table is reduced from the observations made at the Jesuits' College of that city, during the year 1857. It will be seen that the average maximum of the thermometer was $88^{\circ} 7'$, the average minimum $38^{\circ} 9'$, and the average mean 65° of Fahr. The barometrical average mean 25.23 inches, the range being very slight, showing a very equable atmospheric status. The amount of rain which fell during the year was 54.5 inches, being but little over one half of the amount which fell on the Isthmus, between Lake Nicaragua and the Pacific, during the year 1852, viz., 97.7 inches. The average amount of rain which falls in America under the tropics is calculated by Prof. Johnson, in his tables, at 113 inches. At some points in Brazil, as, for instance, San Luis de Maranhao, the annual average is 276 inches; and in Guadalupe and some of the Lesser Antilles, as high as 292 inches.

Observations made in the city of Guatemala, in the year 1842, by Colonel De Puydt, gave the following results:

1842.		6 to 9 A. M.	1 to 3 P. M.	Midnight.	Mean Average.
February	20th to 28th	63.5°	77.0°	59.0°	66.5°
March	1st to 31st	64.6°	77.0°	59.0°	66.8°
April	1st to 30th	63.5°	79.2°	60.1°	67.6°
May	1st to 31st	63.5°	83.7°	60.1°	69.1°

Similar observations made *at noon*, at the port of Santo Tomas, thirty miles to the westward of Omoa, for the months of January, February, and March of the same year, gave the following:

January, 1842, at noon	.	.	.	82.6° Fahr.
February, " " "	.	.	.	83.7° "
March, " " "	.	.	.	87.1° "

TABLE OF METEOROLOGICAL OBSERVATIONS, MADE IN THE CITY OF GUATEMALA, FOR THE YEAR 1857,
AT THE JESUITS' COLLEGE.

1857.	Thermometer.			Barometer.			Number of Days of							Amount of Rain in inches.	Prevailing Winds.				Number of Days		
	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.	Rain.	Hail.	Fogs.	Lightning.	Thunder.	Storms.	Earthquakes.		N.W., N.E., or S.S.W.	Variable.	Calm.	Clear.	Clouds.	Obscure.	
January	73.5°	38.9°	57.5°	25.43	25.15	25.30	4	0	4	1	0	0	0	00.20	30	1	0	0	25	2	4
February . . .	81.0°	43.0°	63.0°	25.41	25.08	25.28	1	0	6	2	0	0	0	00.00	18	3	4	3	11	14	3
March	81.1°	46.0°	63.6°	25.33	25.10	25.25	5	0	7	8	1	1	0	00.55	21	3	5	2	12	17	2
April	88.7°	51.6°	68.9°	25.34	25.09	25.21	9	0	10	12	3	7	0	02.07	9	12	5	4	8	15	7
May	102.3°	52.5°	68.1°	25.29	25.07	25.20	17	1	7	8	4	9	0	05.28	11	11	5	3	9	11	11
June	82.3°	54.6°	67.1°	25.28	25.09	25.15	24	0	5	9	8	13	1	13.28	4	8	9	9	4	8	18
July	81.3°	53.7°	66.2°	25.33	25.07	25.20	25	0	7	15	5	12	1	11.72	13	4	7	7	0	16	15
August	80.9°	53.6°	66.2°	25.34	25.11	25.24	20	0	10	18	5	5	0	11.12	17	4	10	0	9	12	10
September . .	77.9°	54.5°	66.0°	25.30	25.11	25.21	18	0	10	15	7	4	1	05.40	19	0	11	0	12	11	7
October	82.4°	53.6°	65.6°	25.31	25.10	25.20	17	0	9	12	1	0	1	03.55	19	6	4	2	10	11	10
November . .	80.2°	49.5°	64.6°	25.37	25.07	25.23	11	0	8	11	1	0	3	01.11	19	4	6	1	12	12	6
December . . .	77.0°	46.5°	62.6°	25.35	25.10	25.26	5	0	4	2	1	0	0	00.24	25	2	2	2	19	10	2
For the Year	88.7°	38.9°	65.0°	25.34	25.07	25.23	156	1	87	113	36	55	7	54.52	205	59	68	33	131	139	95

M. De Puydt, from information collected in Guatemala, constructed the following table, illustrative of the seasons as marked in that republic:

Localities.	Days			
	Of continuous Rain.	Without Rain.	Without Rain during the Changes.	Of variable Weather.
Atlantic coast .	105	110	30	120
Pacific coast . .	90	125	40	110
Interior	100	130	45	90

Of the plateau of Guatemala he remarks, "Here, as generally throughout the interior, the mean temperature is 17° of Reaum. (70° of Fahr.) during the summer. The prevailing winds are from the north; so that the climate, as compared with that of the coast, where the mean temperature is 22° of Reaum. ($81^{\circ} 5'$ of Fahr.), is almost cold, or at least so regarded by the inhabitants of the country."

Belize.—The British establishment of Belize, situated near the southern extremity of the peninsula of Yucatan, on the Bay of Honduras, in lat. $17^{\circ} 39'$ N., and long. $88^{\circ} 12'$ W., has a temperature and climate which may be regarded as common to the entire eastern coast of Guatemala and Yucatan, and probably not far different from that of the islands off the same coast in the Bay of Honduras. Observations made here, under the authority of the governor, for the year 1848, gave the following results:

TABLE OF THERMOMETRICAL OBSERVATIONS MADE AT BELIZE
(BRITISH HONDURAS) FOR THE YEAR 1848.

Months.	Average Maximum.	Average Minimum.
January	82°	66°
February	85°	73°
March	83°	75°
April	89°	74°
May	89°	75°
June	90°	77°
July	90°	78°
August	90°	78°
September	91°	76°
October	87°	75°
November	85°	68°
December	86°	75°

That is to say, the average mean temperature, for the year 1848, was 79° Fahr.

The amount of rain which fell at the same place, during the same year, was but $47\frac{2}{10}$ inches, or less than one half the amount which fell in Nicaragua, in 1852.

TABLE SHOWING THE FALL OF RAIN AT BELIZE (BRITISH
HONDURAS) FOR THE YEAR 1848.

January	$2\frac{7}{10}$ inches.
February	$4\frac{2}{10}$ "
March	0 "
April	0 "
May	$2\frac{5}{10}$ "
June	$4\frac{3}{10}$ "
July	$3\frac{3}{10}$ "
August	$0\frac{6}{10}$ "
September	$8\frac{2}{10}$ "
October	$4\frac{8}{10}$ "
November	$9\frac{9}{10}$ "
December	$6\frac{7}{10}$ "
Total for the year	$47\frac{2}{10}$ inches.*

Previous observations made by Captain George Hen-

* For the year 1855, the following amounts of rain fell: City of New York, 44 inches; Philadelphia, 45 inches; New Orleans, 71 inches; Baltimore, 51 inches.

derson, commander of the garrison, in the year 1806, for seven months, from February to August inclusive, coincide with the foregoing results:*

“FEBRUARY.—Thermometer; morning, 77° Fahr.; noon, 81° Fahr.; prevailing winds, N., E., and E.N.E.; clear days, 15.

“Heavy rain generally during the night; frequent heavy showers during the day. This month being included in what is denoted the *dry season*, the rains that have fallen have been considered unusual.

“MARCH.—Morning, 77°; noon, 81°; 21 clear days; prevailing winds, N., N.E., E.N.E., and S.E.

“The greater part of this month has been dry and pleasant; light dews at night. The sea-breeze, which prevails with great regularity at this season, has been partial and moderate.

“APRIL.—Morning, 80°; noon, 85°; 21 clear days; prevailing winds, S.E., E.S.E., and E.

“The whole of this month has been particularly fine, and breezes regular and strong. Rains, with loud thunder, frequent during the night, sometimes accompanied with sudden and violent gusts of wind.

“MAY.—Morning, 82°; noon, 85°; 21 clear days; prevailing winds, S. or E.S.E.

“This month has been particularly dry, but exceedingly pleasant from the regularity and strength of the sea-breeze. The conclusion of it, however, being cloudy, and attended with frequent heavy showers, shows the approach of the periodical rains.

“JUNE.—Morning, 81°; noon, 83°; 14 clear days; prevailing winds, E., N.E., and E.N.E.

“The wet season generally commences in the early part of

* “The climate of this part of the American continent is greatly superior to that of most other parts of the same vast portion of the globe, either in higher or lower degrees of latitude. It is equally superior to the climate of the West India islands generally, for persons whose health and constitutions have become impaired from the effects of the latter very frequently acquire a sudden restoration of both after an arrival in Honduras.

“With the exception of a few months of the year, this country is constantly refreshed by regular sea breezes, accompanied by an average heat that may be taken at the temperature of 80°.”—*Henderson's Honduras*, p. 13.

this month, about the 10th, and continues through the remainder of it. This season the rains have set in earlier than common. Thunder at this time is also frequent, and sometimes tremendously violent.

“JULY.—Morning, 81° ; noon, 83° ; 12 clear days; prevailing winds, N.E., E., and S.E.

“The weather for the greater part of this month has been unsettled and stormy; much vivid lightning, chiefly at night, accompanied with loud thunder.

“AUGUST.—Morning, 81° ; noon, 84° ; 19 clear days; prevailing winds, N.E., E., and S.E.

“The greater part of this month has been exceedingly close and sultry, with frequent and heavy thunder-storms.”

CHAPTER III.

POPULATION—GUATEMALA, SAN SALVADOR, HONDURAS, NICARAGUA, AND COSTA RICA.

THE population of Central America, in the absence of reliable data, can only be calculated approximately. Attempts were made under the crown, and subsequently under the republic, to effect a complete census, but with very unsatisfactory results, since it has always been found that the ignorant masses of the people, and especially the Indians, avoid a census as in some way connected with military conscription or taxation. They have been known to abandon their homes, and hide themselves for weeks in the mountains, to escape the commissioners! Again: the bulk of the Spanish population exists on the Pacific slope of the continent, while on the Atlantic declivity the country is either uninhabited, or sparsely occupied by Indian tribes, of which the number is wholly unknown. A considerable aboriginal population exists in the district of Peten, in the north of Guatemala, and there are several tribes, such as the Xicaques, Payas, Tonglas, Woolwas, Towkas, Ramas, Guatusos, etc., in the Atlantic divisions of Honduras, Nicaragua, and Costa Rica, none of whom have entered, as an element, in any calculation of the absolute population of the country.

The royal census of the Captain-Generalcy of Guatemala (which included not only the five states of Central America, but also the present state of Chiapa, and the district of Soconusco in Mexico), made in 1778, gave

an aggregate of 805,339 inhabitants. Under this census Guatemala (exclusive of Chiapa and Soconusco) had 430,859 inhabitants, classified as follows :

Spaniards (whites)	15,232
Ladinos	27,676
Indians and Negroes	387,951
Total	430,859

San Salvador (including Sonsonate, which is now one of its departments) had 161,954 inhabitants.

The diocese of Comayagua, comprising the Province (now State) of Honduras, had 88,143 inhabitants. Thirteen years subsequently, in 1791, an enumeration was made of the population of the same diocese, by its bishop, which gave 93,500, or an increase of 5357. But, as I have already said, these returns merit but little confidence, and can not be made the basis of any estimate of the actual population of Central America.

In 1825, the state authorities of Guatemala undertook a census, which resulted in an aggregate of 507,126 inhabitants, being an augmentation in forty-seven years of only 76,267. Another attempt was made, by the same authorities, twelve years later, in 1837, which gave a total of 490,787, or less by 16,339 than in 1825! This census was discredited at the time, and Don José de la Valle, a statistician of some eminence, made a calculation that the state then contained 600,000 inhabitants.

A census was ordered by the general government of the Republic of Central America in 1834, but the results were imperfect, and have never been published. It gave Guatemala a population of 460,012 inhabitants.

In the absence, then, of direct returns, we must have recourse to other means of calculation. In this we

are assisted by partial returns of births and deaths in the various districts of several of the states.

Humboldt deduced, from a careful observation of the laws of population in Mexico, that the proportion of births was as 1 to 17, and of deaths as 1 to 30 of the whole population, and that the proportion of births to deaths in the country at large was as 17 to 10. Now, as Mexico, in general aspect, climate, and other conditions, corresponds very closely with Central America, we might assume that the latter country would show but a slight deviation from the same law.

But the data which we possess go to show that the proportion of births to deaths in Central America is considerably greater than in Mexico. In Costa Rica, according to the tables for 1850, the births were 4767, and the deaths 1786, being a proportion of births to deaths of 47 to 17. Again: in Guatemala, for the year 1852, we have the following returns, exclusive of the district of Peten: births, 38,858; deaths, 21,298, or about 10 deaths to 19 births. In San Salvador we have similar results. In the Department of Sonsonate, for the six months ending December 30th, 1853, the births were 1731, deaths 879, or about 10 deaths to 21 births. In the Department of Cuscatlan, for nine months, births 2405, deaths 1099. For the first six months of the year 1849, the births were reported at 1900, and the deaths 403. In the Department of San Salvador, embracing the capital, for the last three months of 1849, births 786, deaths 222. In the Department of La Paz, however, which is comparatively low and unhealthy, this excess of births is not sustained, since, for the year 1855, we find, births 1274, deaths 706. The following statistical tables will serve to verify these results:

GUATEMALA.

Official Statement of Marriages, Births, and Deaths in the State of Guatemala for the Year 1852, exclusive of the District of Peten.

Departments.	Marriages.	Births.	Deaths.	Increase.
* Guatemala	240	3416	1848	1568
Sacatepequez . .	170	1688	1182	506
Amatitlan	130	1481	1073	408
Escuintla	135	825	421	404
† Vera Paz	828	4260	1642	2618
Santa Rosa	149	1313	466	847
Jutiapa	113	790	291	499
Chiquimula	562	4155	2127	2028
Izabal	32	67	85	—18
Chimaltenango . .	330	2550	2192	358
Quezaltenango . .	403	3119	1560	1559
Suchitepequez . .	216	1682	736	946
Totonicapam . . .	905	5307	2896	2411
Sololá	658	3083	1697	1386
San Marcos	592	2711	1744	867
Huehuetenango . .	383	2411	1338	1073
Total	5836	38858	21298	17478

The unhealthy port of Izabal, or Golfo Dulce, decreased in population 18.

COSTA RICA.

Official Statement of Marriages, Births, and Deaths in the State of Costa Rica for 1850.

Departments.	Marriages.	Births.	Deaths.	Increase.
San José	178	1492	466	1026
Cartago	165	956	293	663
Heredia	128	911	362	549
Alejuela	131	939	424	515
Guanacaste	62	471	223	248
Total	664	4769	1768	3001

* The births and deaths in the city of Guatemala for 1854, according to official tables, were

Marriages	172
Births	1467
Deaths	548

† In 1833, it was calculated by Don José Asmitia, then Secretary of State of Guatemala, that the Department of Vera Paz, exclusive of Peten, contained 60,237 inhabitants. The number of marriages in that year was 645; births, 4048; deaths, 1186.

SAN SALVADOR—IMPERFECT.

Departments.	Marriages.	Births.	Deaths.	Increase.
Santa Ana (12 months, 1855)	315	2246	1266	980
La Paz (12 months, 1855).	213	1274	706	568
Sonsonate (9 months)	267	2279	1099	1180
Cuscatlan (9 months)	135	2405	816	1589
San Salvador (3 months) . .	98	786	222	564
San Vicente (3 months) . .	52	565	338	227
Total	1080	9555	4447	5108

SUMMARY.

States.	Births.	Deaths.	Increase.
Guatemala (1852)	38,856	21,298	17,578
Costa Rica (1850)	4,769	1,768	3,001
San Salvador (imp.) . . .	9,555	4,447	5,108
Total	53,180	27,513	25,687

It results, therefore, that the proportion of births to deaths in Central America is very nearly as 265 to 137, or about 2 to 1. The State of Honduras, which is generally remarkably salubrious, would probably show about the same proportion with Costa Rica, while Nicaragua, although comparatively low, would not fall much behind Guatemala.

Now, assuming the proportion of births and deaths, as fixed by Humboldt in treating of Mexico, to be in respect to the aggregate population as 1 to 17 of the former, and 1 to 30 of the latter, we deduce $(38,858 \times 17) + (21,298 \times 30) \div 2 = 648,763$ as the population of Guatemala. There are many reasons for believing, however, that this number falls considerably short of the truth. In Costa Rica, the total population, exclusive of the wild tribes, was put down, under the last census, at 95,000, which, it will be seen by reference to preceding tables, gives a proportion of births 1 to 20, and of deaths 1 to 54, of the entire population.

Señor Barberena, of Guatemala, to whom the returns for that state for 1846 were referred, calculated that the births were in the proportion of 1 to 25 of the total population. The births for the year in which he wrote (1849) being 36,998, he deduced 934,495 as the population of the state. I am, however, inclined to think that this is too high an estimate. If we adopt the ratio of births and deaths in Costa Rica as applicable to Guatemala, we have 1,013,126 as the population of the state—a number clearly too great.

I prefer to estimate the total population of Guatemala for 1852 at 787,000, which gives a proportion of births as 1 to 21, and of deaths as 1 to 38 of the entire population, equivalent to about 890,000 on the first day of January, 1858.

Costa Rica, according to the last census, had 100,174 inhabitants, including 5000 savages, in the proportion of 90,000 whites and Ladinos to 10,000 Indians, as follows:

COSTA RICA.									
Departments.									Population.
San José	.	.	.	.	.	.	.	.	31,749
Cartago	.	.	.	.	.	.	.	.	23,209
Heredia	.	.	.	.	.	.	.	.	17,289
Guanacaste	.	.	.	.	.	.	.	.	9,112
Alejuela	.	.	.	.	.	.	.	.	12,575
Punta Arenas	.	.	.	.	.	.	.	.	1,240
Savage Tribes	.	.	.	.	.	.	.	.	5,000
Total	.	.	.	.	.	.	.	.	100,174

Don Felipe Molina, in his "*Bosquejo de Costa Rica*," regards this result as short of the truth, and estimates that the actual population of Costa Rica in 1850 was not far from 150,000; but his views upon this point are not sustained by any reliable data. The present population of Costa Rica, under the ratio of increase

shown by the returns of 1850, must now (1858) be little short of 135,000.

In respect to Nicaragua, we have the authority of Don Miguel Sarabia, its last governor under the crown, who wrote a memoir on that state in 1823.* He says, "The population at the last *padron* (registry), in the year 1813, gave a total of 149,751 inhabitants. We know this to have been imperfect, having been taken by unskillful persons, and under many difficulties. The population in many sections is dispersed and inaccessible, and an enumeration is associated in the minds of the vulgar with ideas of contributions and personal service. An enumeration made in 1800, although probably not more correct, gave a population of 159,000. It would thus appear that there had been a diminution of numbers; but such is not the fact, as is evident from all concurrent testimony, the growth of the towns, and the circumstance that there have been neither famines, wars, or other causes to produce such a result." Nevertheless, taking the census of 1813 for the basis of his calculation, and estimating the decennial increase at fifteen per cent., he arrives at a total of 174,213 in 1823. But, retaining the same elements of calculation, on the basis of the census of 1800, we would have, in 1823, a population of 212,000.

According to the returns of a census attempted in Nicaragua in 1846, the total population of that state, exclusive of the Department of Guanacaste (in dispute with Costa Rica), was 257,000, distributed among five departments, as follows:

* *Bosquejo Político Estadístico de Nicaragua, formado in el año de 1823, por Miguel Gonzalez Sarabia, General de Brigada. Guatemala, 1824*

NICARAGUA—1846.

Departments.	Population.
Meridional	20,000
Oriental	95,000
Occidental	90,000
Septrentional of Segovia	12,000
“ Matagalpa	40,000
Total	<u>257,000</u>

Assuming these returns to be correct, we may safely estimate the present population of Nicaragua at 300,000.

San Salvador has, relatively to its extent, much the largest population of any of the states of Central America, but we are without complete census returns, except for a single department. In the year 1849, the Department of Cuscatlan had a total of 62,361 inhabitants, distributed in four districts, as follows: District of Suchitoto, 13,234; Cojutepeque, 25,737; Chalatenango, 14,011; Tejutla, 9379=62,361. Of these, 16,165 were men, 17,903 women, 15,026 boys, and 13,317 girls. The town of Cojutepeque had 11,072 inhabitants; that of Suchitoto, 6251; Ilobasco, 4259; and Chalatenango, 3052.

Now, by reference to the preceding returns of births and deaths in several of the departments of this state, we find that the quarterly increase in the Department of Cuscatlan is 523, in that of Santa Ana 245, in that of San Vicente 227, in that of Sonsonate 370, in that of San Salvador 564, and in that of La Paz 142, from which we may legitimately infer that San Salvador and Sonsonate have respectively about the same number of inhabitants with Cuscatlan, and that La Paz has about one fourth as many. Of the two remaining departments, San Miguel has probably more than Cuscatlan, and San Vicente two thirds as many.

Assuming these elements of calculation to be good, and that the population of the Department of Cuscatlan has had a constant annual increase of about 2000, as evinced by the returns of births and deaths, we have the following estimate of the population of the entire state at the commencement of the present year :

SAN SALVADOR—1855.	
Departments.	Population.
Cuscatlan	75,000
Sonsonate	75,000
San Salvador	80,000
San Miguel	80,000
La Paz	28,000
San Vicente	50,000
Santa Ana	45,000
Total	433,000

The data necessary for calculating the population of Honduras are even fewer than we possess concerning the other states of Central America. We have neither absolute returns of population, nor returns of births and deaths. The only facts which bear upon the matter are the bishop's census of the province in 1791, which gave 93,500 as the total population, and the census of the single department of Gracias in 1834, which gave 30,017 inhabitants. We may nevertheless assume for this state a ratio of increase as great as for any other state of Central America, for none has a climate more salubrious. Taking the same ratio of increase with Costa Rica, the Department of Gracias would now have 50,000 inhabitants, which number, after having traveled over a great part of the department, I am convinced is not far from the truth. Now, of the remaining departments of Honduras, it is probable that Sta. Barbara and Choluteca about equal Gracias in population, while Tegucigalpa and Comayagua

exceed, and Yoro and Olancho fall below it in this respect. Having visited and passed through all of the departments except Yoro and Olancho, I estimate their respective populations as follows, in round numbers, and exclusive of the wild Indian tribes in the eastern section of the state :

HONDURAS—1855.		
Departments.		Population.
Sta. Barbara	. . . . .	45,000
Gracias	. . . . .	55,000
Comayagua	. . . . .	65,000
Tegucigalpa	. . . . .	65,000
Choluteca	. . . . .	50,000
Olancho	. . . . .	50,000
Yoro	. . . . .	20,000
Total	. . . . .	<u>350,000</u>

These calculations are all exclusive of the Indians, who are not directly incorporated in the civil organization of the various states, or who fall under the local denomination of "*Tribus Errantes*"—a misapplied designation, since all the Central American Indians are fixed in their habits of life. The nearest approach to a nomad life is found among the mongrel savages called "Moscos" or "Mosquitos," on what is known as the "Mosquito Shore." They are a mixed breed of negroes and Indians, who derive their principal support from the creeks and lagoons on the coast, to which their residence is strictly confined. It is not probable that they number more than 6000. The number of the Xicaques, Payas, Towkas, Woolwas, and Ramas, which intervene between the coast and the Spanish settlements, can not be accurately estimated. The Guatusos, Talamancas, and other tribes in Nicaragua and Costa Rica are also omitted in the above estimates, as are also the Itzaes and affiliated families, La-

candones, Manches, etc., occupying the northern part of the Department of Vera Paz, in Guatemala, and who are supposed to be numerous. Nearly all of these Indians admit a qualified allegiance to the various states within which they fall, but the relationship is scarcely more than nominal. Thus, in 1836, the government of Central America made a kind of treaty with the Manches, in which the Indians acknowledged the sovereignty of the republic, but were to be exempt from the operations of its laws for six years, and, furthermore, were never to be called in question as to their religion, nor disturbed in their practice of polygamy. Wherever the governments assume to exercise jurisdiction, it is through Indian officials, who nevertheless administer affairs after the immemorial manner of the Indians themselves, as in the case of the Nahuals of the Balsam Coast of San Salvador, who live almost within sight of the capital of the state.

The aggregate population of Central America, as deduced from the foregoing data, is as follows :

CENTRAL AMERICA—1855.

States.	Area in Square Miles.	Population.	Number to Square Mile.
Guatemala	43,380	890,000	20
Honduras	39,600	350,000	9
San Salvador . . .	9,594	433,000	45
Nicaragua	49,500	300,000	6
Costa Rica	23,000	135,000	6 nearly.
Total	165,054	2,108,000	12 $\frac{1}{2}$

Scanty as this population seems to be, it is nevertheless, relatively to the area of Central America, much larger than that of any of the Spanish American states. Chili has scarcely two thirds as many inhabitants to the square mile, and Mexico but little more than half as many, as will appear from the subjoined table, compiled from the latest and most authentic sources.

COMPARATIVE TABLE.

Countries.	Square Miles.	Population.	Number to Square Mile.
Central America	165,054	2,108,000	$12\frac{1}{2}$
Mexico	762,000	7,853,000	10
New Granada .	380,000	1,360,000	$3\frac{2}{3}$
Venezuela	410,000	887,100	$2\frac{1}{4}$
Ecuador	320,000	550,000	$1\frac{3}{4}$
Peru	405,000	1,500,000	$3\frac{1}{2}$
Bolivia	380,000	1,200,000	$3\frac{1}{6}$
Chili	170,000	1,300,000	8
Brazil	2,720,000	4,450,000	2 nearly.

The data bearing upon the proportion of sexes in the aggregate population, although too imperfect to be worth presenting, nevertheless go to show that, as in Mexico, there is a considerable preponderance of females over males. The disproportion between the sexes in births is not so great as in deaths; for while there are nearly as many males born as females, considerably more of the former die annually than of the latter. This is confirmed by general observation, since the fact that there are more old women than old men could scarcely escape the notice of the most careless traveler. This result is not to be ascribed to any supposed exemption of females from fatigue and exposure, as they really perform an equal share of the labor of the country, and, excepting in the towns, are quite as much exposed to influences detrimental to health as the males. They are, however, much less addicted to drunkenness, a vice which, under the tropics, is rapid and certain in its consequences. The returns of the partial census of Nicaragua, in 1846, gave for the Department Occidental (Leon) 25,870 males, and 48,058 females; total, 73,928, or a proportion of almost two females to one male. Assuming that there are no errors in these figures, we can only partially account for the disparity by

ascribing it to the wars which afflicted that department for several years previously, and in which its inhabitants maintained an obstinate conflict, single handed, not only against the remaining districts of the state, but against the combined forces of Honduras and San Salvador. The Department of Cuscatlan, in San Salvador, as we have seen, had, in 1849, a population of 16,165 men, and 17,903 women, an excess of 1838 women; while, on the other hand, the boys were 15,026, girls 13,317, or an excess of 1709 boys.* In Costa Rica the proportion is 6 females to 5 males.

The relative proportions of whites, mixed (Ladinos), and Indians, in the populations of the various Spanish American states, is a subject of profound interest, and to the modern student will appear of vital consequence in all speculations on the condition, capacities, and destinies of the people of those countries. But here we have also to regret the absence of reliable data; for while it is the concurrent testimony of all intelligent and observing men in Central America that the pure whites are not only relatively but absolutely decreasing in numbers, and that the pure Indians are rapidly increasing, and the Ladinos more and more approximating to the aboriginal type, yet the statistics bearing directly upon the subject are imperfect or wholly wanting. The actual Bishop of Guatemala, Sr. Don Garcia Pelaez, writing in 1841, and proceeding upon the census of 1837 and other data within his reach, estimated the population of Central America, at that time, to be, Spaniards and white Creoles, 87,979; La-

* "In Central America, an extraordinary excess is observable in the births of white and Ladina females over those of the males; the former being in the proportion to the latter as six, or at least as five to four. Among the Indians, the births of males and females are about equal."—Col. GALINDO, *Journ. Roy. Geog. Soc. of London*, vol. vi., p. 126.

dinos, 619,167; Indians, 681,367; total, 1,390,513. This calculation allows one white inhabitant to sixteen mixed and Indian, which proportion, I entertain no doubt, has now decreased to, at most, one of the former to twenty of the latter.

Don Miguel Sarabia, whose memoir on Nicaragua, written in 1823, is elsewhere quoted, estimated the entire population of that province at that period at 174,213, and gave it as his judgment that about two fifths, or 79,680, were Indians, two fifths Ladinos, and less than one fifth whites. The latter he considered as diminishing in numbers, and such, he observes, "*is their general tendency.*"

Colonel Galindo, an intelligent officer in the service of the old Federation of Central America, in a communication to the Royal Geographical Society of London, estimated the entire population of Central America, at the period when he wrote (1837?), at 1,900,000, divided as follows:

States.	Indians.	Ladinos.	Whites.	Totals.
Guatemala . .	450,000	150,000	100,000	700,000
Honduras . . .		240,000	60,000	300,000
San Salvador.	90,000	230,000	80,000	400,000
Nicaragua. . .	120,000	120,000	110,000	350,000
Costa Rica . .	25,000		125,000	150,000
Total . .	685,000	740,000	475,000	1,900,000

The proportion of whites is largely over-estimated by Galindo. He puts down Honduras as without an Indian population, when there can be little doubt that at least one third, if not one half of its inhabitants, apart from the wild tribes, are of pure Indian stock.

Mr. Thompson, who was British commissioner to the old Federation of Central America in 1823, estimated the relative proportions of the people as follows:

Whites and Creoles	One fifth.
Mixed Classes	Two fifths.
Indians	Two fifths.

He estimated the Europeans, "or perfect whites," at not more than 5000. Mr. Crowe, referring specifically to Guatemala, calculates the proportions as follows :

Indians	Three fifths.
Ladinos	One fourth.
Whites	One fortieth.
Mulattoes	One eightieth.
Negroes	One fiftieth.
Sambos	One hundredth.

Ladinos, it may be observed, is a term signifying gallant men, and is understood to apply to the descendants of whites and Indians. It is only used in Central America.

The following table probably exhibits very nearly the exact proportions in Central America, so far as they may be deduced from existing data and from personal observation :*

Whites	100,000
Mixed	800,000
Negroes	19,000
Indians	1,189,000
Total	<u>2,108,000</u>

From the foregoing facts and observations, it may

* The various classes in Mexico were estimated by Mr. Brantz Mayer in 1842 as follows :

Indians	4,000,000
Whites	1,000,000
Negroes	6,000
Mixed	<u>2,009,000</u>
Total	<u>7,015,000</u>

This estimate gives a ratio of whites as one to seven of the entire population. In some of the states the proportion is greater, in others less. In Peru, Humboldt calculated the white population as 12 in 100, or about one to nine.

be deduced generally that Central America is relatively the most populous portion of Spanish America; that, while its population is increasing in a constant and rapid ratio, the exotic or European element is not only decreasing relatively, but in fact; and that the direct tendency of things is to its speedy absorption in the indigenous or aboriginal races. In this respect, as indeed in its moral and intellectual condition, Central America, not less than all Spanish America, seems to furnish a striking illustration of the laws which have been established as the results of anthropological inquiries during the past fifty years. Neither the statesman nor political economist can safely overlook or disregard these results, since, by the course of events, and the multiplication of means and facilities of communication, nations and races are more and more brought in contact, and the question of the nature and character of their relationship made of immediate and practical importance.

It may be claimed without hesitation that the wide physical, intellectual, and moral differences which all history and observation have distinguished as existing between the various families of man, can be no longer regarded as the consequences of accident or circumstances; that is to say, it has come to be understood that their physical, moral, and intellectual traits are radical and permanent, and that there can be no admixture of widely-separated families, or of superior with inferior races, which can be harmonious, or otherwise than disastrous in its consequences. Anthropological science has determined the existence of two laws of vital importance in their application to men and nations:

First. That in all cases where a free amalgamation takes place between two different stocks, unrestrained

by what is sometimes called prejudice, but which is, in fact, a natural instinct, the result is the final and absolute absorption of one in the other. This absorption is more rapid as the races or families thus brought in contact approximate in type, and in proportion as one or the other preponderates in numbers; that is to say, Nature perpetuates no human hybrids, as, for instance, a permanent race of mulattoes.

Second. That all violations of the natural distinctions of race, or of those instincts which were designed to perpetuate the superior races in their purity, invariably entail the most deplorable results, affecting the bodies, intellects, and moral perceptions of the nations who are thus blind to the wise designs of Nature, and unmindful of her laws. In other words, the offspring of such combinations or amalgamations are not only generally deficient in physical constitution, in intellect, and in moral restraint, but to a degree which often contrasts unfavorably with any of the original stocks.

In no respect are these deficiencies more obvious than in matters affecting government. We need only point to the anarchical states of Spanish America to verify the truth of the propositions here laid down. In Central and South America, and Mexico, we find a people not only demoralized from the unrestrained association of different races, but also the superior stocks becoming gradually absorbed in the lower, and their institutions disappearing under the relative barbarism of which the latter are the exponents. If existing causes and conditions continue to operate, many years can not pass before some of these countries will have relapsed into a state not far removed from that in which they were found at the period of the conquest.

In Mexico there are less than two millions of whites,

or of persons having a preponderance of white blood, out of a population of eight millions; in Central America, less than two hundred thousand out of two millions; and in South America at large, the proportions are nearly the same. It is impossible, while conceding all the influence which can be rationally claimed for other causes, to resist the conviction that the disasters which have befallen those countries are due to a grand practical misconception of the just relations of the races which compose them. The Indian does not possess, still less the South Sea Islander, and least of all the negro, the capacity to comprehend the principles which enter into the higher order of civil and political organizations. His instincts and his habits are inconsistent with their development, and no degree of education can teach him to understand and practice them.

In the Sandwich Islands there are about 60,000 natives still remaining. It may be alleged that they have constituted and sustained a regular government, and have thus evinced the requisite conditions to enter into the great family of nations. But it is notorious that, whatever there exists of government, both in its origin and administration, is the work of foreigners and of white men.

To the Indians upon our southwestern border these remarks are scarcely less applicable. Under no circumstances have the North American Indians exhibited an appreciation of the value, or a disposition to abide by the reciprocal obligations involved in a government of the people. Their ideas of government, like those of the Arabs, and the nomadic hordes of Central Asia, are only consonant with the system called patriarchal: ideas which, at this day and in this country, are not only wholly inapplicable, but antagonistic

to those upon which our system is founded. The only instance in which they have made a sensible progress in the right direction is that of the Cherokees, under the guidance of chiefs in whose veins flows a predominance of European blood. And while it may be admitted that the Indians of the old Floridian stock are in all respects superior to the islanders of the Pacific, yet neither in industry, docility, or traditional deference to authority are they equal to the Indian families of Mexico and Central America, where the attempt to put the latter on a political and social footing with the white man has entailed eternal anarchy, and threatens a complete dissolution of the political body.

In Guatemala, as in Yucatan, it has brought about a bloody and cruel war of castes, and a complete prostration of civil and religious liberty. Not less disastrous has been the result in Mexico, while in Jamaica savage nature is fast resuming her dominion over deserted plantations, and the woods begin to swarm with half-naked negroes, living upon the indigenous fruits of the soil, and already scarcely one degree removed from their original barbarism in Africa.

To the understanding of intelligent and reflecting men, who are superior to the partisan and sectional issues of the hour, these considerations can not fail to appeal with controlling force; for if the United States, as compared with the Spanish American republics, has achieved an immeasurable advance in all the elements of greatness, that result is eminently due to the rigid and inexorable refusal of the dominant Teutonic stock to debase its blood, impair its intellect, lower its moral standard, or peril its institutions by intermixture with the inferior and subordinate races of man. In obedience to the ordinances of Heaven, it has rescued half a

continent from savage beasts and still more savage men, whose period of existence has terminated, and who must give place to higher organizations and a superior life. Short-sighted philanthropy may lament, and sympathy drop a tear as it looks forward to the total disappearance of the lower forms of humanity, but the laws of Nature are irreversible. *Deus vult*—it is the will of God!

From this point of view, it appears that the only hope of Central America consists in averting the numerical decline of its white population, and increasing that element in the composition of its people. If not brought about by a judicious encouragement of emigration or an intelligent system of colonization, the geographical position and resources of the country indicate that the end will be attained by those more violent means, which among men, as in the material world, often anticipate the slower operations of natural laws. To avert the temporary yet often severe shocks which they occasion, by providing for the necessities of the future, is the true mission, and should be the highest aim of the patriot and statesman. Central America will be fortunate if she shall be found to number among her sons men adequate to the comprehension and control of the circumstances under which she is placed, and which are every day becoming more complicated and exigent.*

* These lines were written in 1855. Since that period Central America has been the scene of events illustrating the truths which they contain in an impressive manner. The future will show if the lessons of experience, as well as the admonitions of friendship, have been lost on the people and governments of that unhappy country. It will indeed be well if, recognizing the circumstances of their position, they shall listen to the warning lately addressed by Señor Juáros to the Legislative Chambers of Nicaragua: "Honorable Representatives: Nicaragua and the whole of Central America find themselves involved in the rapid political, commercial, and social development of maritime and industrial nations; and if Central America does not endeavor to advance with equal step, she is in danger of being effaced from the catalogue of nations."

H O N D U R A S.

CHAPTER IV.

DISCOVERY—BOUNDARIES—GENERAL ASPECT—TOPOGRAPHY, ETC.

IT was in Honduras that Columbus first planted his feet on the continent of America. In 1502, then sailing on his fourth voyage, he discovered the island of Guanaja (or Bonacca), which he named the Isle of Pines. From this island he descried to the southward the high mountains of the main land, and, pursuing his course in that direction, on the 14th of August landed at a point which he called *Punta de Casinas* (now Cabo de Honduras), and formally took possession of the country on behalf of the crown of Spain. He subsequently coasted to the eastward, touching at the mouth of Rio Tinto, or Black River, and finally, after great delays and dangers, reached a point where the coast, abruptly trending to the southward, formed a cape, to which, in gratitude for his safety, he gave the name of "*Cabo Gracias á Dios*," Cape Thanks to God. He lost a boat, with some sailors, in attempting to enter the Great Cape or Wanks River, which was, in consequence, called *Rio del Desastre*. From Cape Gracias he continued his voyage along what is now the Mosquito Shore, called by him *Cariay*, to the Isthmus of Darien.

Less than twenty years afterward, the conqueror of

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Mexico, Hernando Cortez, inspired by the accounts of vast and populous kingdoms to the southward of the prostrate empire of Montezuma, undertook an expedition into Honduras, which at this time was called Hibueras or Higueras. This expedition, both for its length, and the difficulties which were encountered and overcome in its prosecution, stands, and will forever stand, unprecedented and unapproachable in the history of martial adventure.

Starting from the Isthmus of Tehuantepec, Cortez boldly entered the vast and unknown wilderness which intervened between the confines of Mexico and the country of which he was in search. For two years he struggled among deep morasses, broad and almost impassable rivers, and high and desert mountains, with almost superhuman courage and endurance. At the end of that time he reached the point where Columbus had made his first landing in Honduras, and there, after receiving the submission of the neighboring chiefs, he founded the ancient city, now the port, of Truxillo.

In addition to the names of Columbus and Cortez, those of Alvarado, Cristoval de Olid, and Cordova appear in the list of daring and zealous captains who distinguished themselves in the exploration of the country and its reduction to the Spanish crown. But it is not my purpose to write the history of Spanish power in Honduras. Suffice it to say that as early as 1540, sixty years before Jamestown was founded, and nearly a hundred years before Hudson entered the Bay of New York, Honduras had its large and flourishing cities, and the Audiencia of the Confines had been established within its borders.

Subsequently the seat of the Audiencia was transferred to Guatemala, and from that time forward, until

the independence of the Spanish American states, Honduras constituted a part of the kingdom or captain-generalcy of Guatemala, which comprised the provinces or intendencias of Guatemala, Honduras, San Salvador, Nicaragua, and Costa Rica. These threw off their allegiance to Spain in 1821, and, assuming the rank of sovereign states, soon after united in a confederacy called the "Republic of Central America." This union, in consequence of internal dissensions and the struggles of factions, became practically dissolved in 1839, since which time, although various efforts have been made to revive its provisions, the several states have asserted and now exercise their original sovereign powers as distinct republics.

The Republic of Honduras, therefore, comprises the territory which pertained to it as a province. It is bounded upon the north and east by the Bay of Honduras and the Caribbean Sea, extending from the mouth of the Rio Tinto, lat. $15^{\circ} 45' N.$, and long. $88^{\circ} 30' W.$, to Cape Gracias á Dios, at the mouth of the Rio Wanks or Segovia, in lat. $14^{\circ} 59'$, and long. $83^{\circ} 11'$, being a coast-line of about 400 statute miles. Upon the south it is bounded by the Republic of Nicaragua. The line of division follows the Rio Wanks for about two thirds of its length, and thence deflects to the southwest to the sources of the Rio Negro, flowing into the Gulf of Fonseca. It has a coast-line of about sixty miles on this gulf, from the Rio Negro to the Rio Goascoran, and embraces the large islands of Tigre, Sacate Grande, and Gueguensi. Upon the west and southwest it is bounded by the republics of San Salvador and Guatemala. The line of separation is irregular. Commencing on the Gulf of Fonseca, at the mouth of the Rio Goascoran, it follows that river for about thirty miles

in a direction due north, to the mouth of one of its affluents from the northwest, called Rio Pescado. From the head of this stream it strikes a branch of the Rio Torola (flowing southwest into the Rio Lempa), which it follows to its mouth. Thence it follows the Rio Lempa to the mouth of the Rio Sumpul, which it ascends nearly to its source, to a point where its waters approach those of the Rio Paza, separating San Salvador from Guatemala. From this point it runs nearly northeast, along the mountain chain of Merendon and Grita, leaving the town and ruins of Copan about fifteen miles to the southeast, until it strikes the headwaters of the small stream called Rio Tinto, which it follows to the Bay of Honduras.

The state is therefore embraced entirely within $83^{\circ} 20'$ and $89^{\circ} 30'$ west longitude, and $13^{\circ} 10'$ and 16° north latitude, and comprises not far from 39,600 square miles, or about the same area with the State of Ohio.

The large island of Roatan, with its dependencies, Guanaja or Bonacca, Utila, Helena, Barbaretta, and Morat, also pertain to Honduras, but are now, under the denomination of the "Colony of the Bay Islands," forcibly occupied by Great Britain, in violation of the rights and sovereignty of Honduras, and of the explicit terms of the treaty with the United States of 1850. Great Britain has also set up claims to a considerable portion of the eastern coast of Honduras, from Cape Comorin, or Cape of Honduras, a few miles to the eastward of Truxillo, to Cape Gracias á Dios, on behalf of the suppositious "Mosquito King."

The general physical features of Honduras have been indicated in the preceding chapter, on the Geography and Topography of Central America. As, however,

the greater part of what follows, in this brief memoir, pertains to this state, I am warranted in entering more into details concerning it. As I have said, its general aspect is mountainous; that is to say, it is traversed in various directions by ranges of mountains and hills, radiating from the common base of the Cordilleras. This great chain, which may be regarded as the foundation and support of the continent, does not, in Honduras, approach within fifty or sixty miles of the Pacific. Nor does it throughout maintain its general character of an unbroken range, but in its course sometimes turns back on itself, forming interior basins or valleys, within which are collected the head waters of the large streams that traverse the country in the direction of the Atlantic Ocean. Nevertheless, viewed from the Pacific, it presents the general appearance of a great natural wall, with a lower range of mountains, relieved by volcanic peaks of wonderful regularity of outline, intervening between it and the Western Sea. It would almost seem that, at one time, the waters of the Pacific broke at the very feet of this great mountain barrier, and that the subordinate coast-range had been subsequently thrust up by volcanic forces. In San Salvador this conjecture seems to be wholly verified; for the high ridge, averaging some two thousand feet in altitude, and which extends from the volcano of San Miguel to that of Apeneca, separated from the true Cordilleras by the parallel valley of the River Lempa, is throughout of volcanic origin. Not less than eleven volcanic peaks bristle along its summit; and the traveler rides from one end of the state to the other over an almost unbroken bed of scorix and ashes, largely mixed with pumice, occasionally relieved by beds of lava and volcanic stones. In Nicaragua this

volcanic range subsides for intervals, and is only marked by high cones and broken craters, while the Cordilleras trend away to the southeast on the northern border of the transverse basin of the Nicaraguan lakes.

As I have said, Honduras has but a narrow frontage of about sixty miles on the Pacific, and within this limit the volcanic coast-range is wholly wanting. Its place is supplied by the high islands, of volcanic origin, pertaining to the state, in the Bay of Fonseca.

The northern and eastern coast of Honduras presents several bold groups of mountains, which are the ends of the dependent ranges radiating north and east from the Cordilleras. These subordinate ranges strike the northern coast diagonally, and lap by each other in such a manner as to appear from the sea like an unbroken chain. Hence it has occurred that in some of the charts of that coast, although the mouths of the large rivers flowing from the interior are indicated, the rivers themselves are rendered impossible by a continuous chain of mountains, represented as skirting the shore at a very short distance inland.

The Cordilleras proper, or the great dividing ridge which separates the waters flowing into the Pacific from those falling into the Atlantic, traverses the state in a general direction northwest and southeast. Its course, however, is serpentine, and at one point, at least, it is interrupted by a large transverse valley, of which, as offering probably the most favorable route for a railway between the two seas, I shall have occasion to speak farther. Starting from the high plateaus of Guatemala, this range pursues a course nearly east until it reaches the frontier of Honduras, where it is deflected to the southeast, while a higher spur, or range, not inferior in elevation to the "Sierra Madre," or

Mother Mountain, runs off east by north to the Bay of Honduras. At the point of separation, this range is called the Mountains of Merendon, afterward Grita, and nearer the coast, the Mountains of Espiritu Santo. On the coast itself, where it sustains the majestic height of between seven and eight thousand feet, it is called the Mountains of Omoa. Along its northern base flows the Rio Motagua, rising near the city of Guatemala, and falling into the Bay of Honduras; and at its feet, on the south, flows the Rio Chamelicon, which in turn is separated from the parallel river Santiago by only a range of hills, terminating in the broad plain of Sula, near the mouth of the River Ulua.

Following the course of the Sierra Madre, we find it, at the distance of a few leagues from the Mountains of Merendon, involving itself in a tangled mass or knot of mountains known as the Mountains of Selaque. Intermediately lies the large valley or plain of Sensenti, in which the Rio Santiago takes its rise. This great plain is not less than thirty miles long, by from ten to twenty wide, and is almost shut in by mountains. Its only outlet is the narrow valley, or rather gorge, through which it is drained by the Rio Higuito or Talgua.

The Mountains of Selaque constitute one of the principal centres of elevation in Honduras, their summits rising to the height of between eight and ten thousand feet. The uppermost branch of the River Santiago, called at various points Talgua, Higuito, Alas, and Rio de la Valle, bends around these mountains on the north and west. Another branch, the Rio Mejicote or Rio Grande de Gracias, separates them on the east from the Mountains of Puca, with their lofty peak, and from the terraced Mountains of Opalaca or Intibucat, with their truncated summits and elevated plains, on which flour-

ish the cereal grains, and the fruits of the temperate zone.

Next in order comes the valley of the Rio Sta. Barbara, one of the principal affluents of the Santiago, which, below the point of junction, is often called the Venta. The Rio Sta. Barbara, like the Santiago, has its sources in high plains, the principal of which is the valley or plain of Otoro, only separated from that of Comayagua by the group of mountains known as the Montecillos. These are formed by the true range of the Cordilleras, which turns abruptly from its general east by south course to a direction due north, and finally loses itself in diverging ranges toward the coast. These divergences create another mountain-bound valley, in the centre of which lies the Lake of Yojoa or Taulebé.

We now come to the most remarkable topographical feature of the state, considered in reference to the facilities which it offers for the grand economic purposes of travel and commerce between the oceans. At the eastern base of the Montecillos range, where the interruption of the Cordilleras is complete, lies the plain of Comayagua, from which, extending due north to the Atlantic Ocean, is the valley of the Rio Humuya, and, extending due south to the Pacific, is the valley of the Rio Goascoran—together constituting a great transverse valley reaching from sea to sea. These two rivers may be said to rise in the same plain, for they both have their sources side by side in the slight dividing ridge or swell of land which defines its southern extremity.

The plain of Comayagua has an extreme length of perhaps forty miles, by a general width of from five to fifteen miles. Its longest axis is nearly due north and

south, coinciding with the general direction of the two rivers already named. It slopes almost imperceptibly toward the north, and is watered by the Rio Humuya, which runs through its centre. It is separated from the considerable plain of Espino on the north by low hills, which alone prevent the two plains from being regarded as one. Together, these two plains, both of surpassing beauty of scenery, fertility of soil, and salubrity of climate, occupy nearly one third of the distance between the Bay of Honduras and that of Fonseca.

Passing the plain of Comayagua, the Cordilleras are resumed in a great mass or group of high mountains, known toward the north as the Mountains of Comayagua, and on the south as the Mountains of Lepaterique. They extend about eighty miles from north to south, and near the centre send off a high range known as the Mountains of Ule, around which, almost describing a circle, flows the Rio Choluteca.

The valley of the Rio Choluteca, after that river turns the flank of the Ule Mountains, is broad and fertile. As it approaches the Bay of Fonseca, it widens into extensive, densely-wooded alluvions, which nevertheless are so high as to be above overflows, and are without swamps or marshes. Dependent upon this valley is a subordinate one, of great beauty, called Valle de Yuguare.

Nearly to the eastward of the high mountains of Comayagua, after passing the river and valley of Sulaco, we come to a knot or group of high mountains, called the Mountains of Sulaco. Standing almost in the centre of the state, it sends the streams which have their rise in its gorges to every point of the compass. Here the great River Wanks or Segovia, reaching the Atlantic at Cape Gracias á Dios, takes its origin, as do

also the large rivers Aguan or Roman, and Tinto or Black River, flowing north into the Bay of Honduras, and the tributaries of the Choluteca, flowing south into the Pacific. From this elevated centre also radiate several extensive ranges of mountains, scarcely inferior to their parent in elevation. That which extends to the northeast, separating the numerous rivers flowing into the Bay of Honduras from the valley of the Rio Wanks or Segovia, is called the Mountains of Misoco. The range which extends to the north, and which terminates its numerous spurs in the high peaks of Congrehoy, frowning over the Bay of Honduras, is called the Mountains of Pija, while the chain which pursues a tortuous course to the southwest, and finally skirts the northern border of the transverse valley of the Nicaraguan lakes, is called the Mountains of Chili. The latter may be regarded as the true Cordilleras. At the base of the Mountains of Sulaco, to the east and northeast, are the broad and elevated plains or terraces of Olancho and Yoro, celebrated, even in Central America, for the number and excellence of their cattle. The rivers on this slope of the continent abound in gold-washings, and may perhaps furnish, when the country becomes better known, a supply of gold scarcely less than that which has been obtained from California. Unfortunately, most of the wide region between the Mountains of Sulaco and the Atlantic, embracing nearly half of the whole territory of the state, is uninhabited except by detached Indian tribes. But little is known of the country, except that it is very diversified, and rich in the nature of its soil and the variety of its minerals.

The northern coast of Honduras presents a diversified surface. A portion is flat, and covered with vast

growths of timber. Among the precious woods, the mahogany is most abundant. It would be a great mistake to suppose this coast to be of the same character with that known as the Mosquito Shore, where the land is low, and filled with hundreds of swamps and lagoons. The mountains, as I have already said, often come down to the sea, or rise not very far inland. The Mountains of Omoa shadow over the Bay of Amatique, and those of Congrehoy and Poyas are conspicuous landmarks from the ocean, which breaks almost at their feet.

PHYSICAL SECTIONS.

The topographical features which I have indicated will probably be best explained by the accompanying vertical sections, reduced from a series of barometrical observations:

I. A section of Honduras, commencing at Puerto Caballos, on the Bay of Honduras, and extending thence southward, following the valleys first of the Rio Ulua and afterward of the Rio Humuya, through the plains of Espino and Comayagua, and past the dividing ridge (which has its greatest elevation at the southern extremity of the plain last named), down the valley of the Rio Goascoran to the Bay of Fonseca on the Pacific Ocean, a distance of one hundred and fifty miles. This section runs through the lowest pass in the whole line of the Cordilleras, from the transverse valley of the Nicaraguan lakes to the Isthmus of Tehuantepec. It exhibits a longitudinal view of the plains of Espino and Comayagua, which may almost be regarded as one. These are remarkable, not only as having their longest axis due north and south, but as lying transversely to the general course of the Cordil-

leras, the altitude of which, where they are interrupted, is also indicated in the section.

This section shows the profile of the proposed inter-oceanic railway from Puerto Caballos to the Bay of Fonseca, and illustrates its eminent feasibility in respect of grades. Under this aspect, as affording an avenue between the seas, the great transverse valley of Comayagua may justly be regarded as the most important physical feature of Honduras.

II. A section commencing at the city of Leon, in Nicaragua, and following the mule-road thence nearly due north to the town of Ocotal, the capital of the Department of Nueva Segovia,* thence nearly due north-west, through the departments of Tegucigalpa and Comayagua, to the town of Santa Rosa, in the Department of Gracias, Honduras. This section, it will be observed, coincides very nearly with the course of the Cordilleras. From Leon to the summit of the mountains near the town of San Juan de la Maya, the mule-path runs on the western side of the Cordilleras, thence to the summit of the Mountains of Chili on their eastern declivity. From the point last named to the summit of the mountains overlooking the plain of Comayagua, the waters flow to the southward; from thence to the high mountains of Intibucat, to the northward. The next summit is crossed near the little town of San Juan (Department of Gracias), beyond which the waters flow toward the north. In other words, this section intersects the Cordilleras at six points:

1. Near San Juan de la Maya, in Nicaragua, at an elevation of 1900 feet.
2. At the crest of the Mountains of Chili, at an elevation of 3400 “

* The barometrical observations upon which is founded that portion of the section from Leon to Comayagua were made by Dr. S. W. Woodhouse, to whom I am indebted for the original notes.

3. At the crest of the Mountains of Comayagua, at
an elevation of 4900 feet.
4. Height of Pass of Guajoca, plain of Comayagua, 2620 “
5. Crest of Mountains of Intibucat 5900 “
6. Near village of San Juan de Gracias 4000 “

The road from Santa Rosa to San Salvador crosses the Cordilleras at the Pass of Canguacota, at an elevation of 4100 feet, but the mule-roads only cross the grand dividing ridge at its lowest passes. These have an average elevation of 3800 feet. Proceeding upon this basis and upon other observations, I think that the average elevation of the Cordilleras of Honduras, exclusive of isolated peaks, may be estimated at not less than 6000 feet. The plateau of Tegucigalpa has an average elevation of 3400 feet, that of Intibucat 5300 feet, and that of Sta. Rosa, or, rather, of the Department of Gracias in general, of 3200, and the plain of Comayagua of 1900 feet. The inhabited central portions of the state, or what may be called the grand plateau of Honduras, has an average elevation of 3200, or something less than one half that of the great plateau of Mexico. It is calculated that temperature diminishes in the proportion of one degree of Fahrenheit for every 334 feet of elevation. The average temperature at noon at the mouth of Black River, on the northern coast of Honduras, as shown in a preceding table, is a little less than 70° Fahr. These elements of calculation would therefore give 60° of Fahr. as the average noonday temperature of the plateau of Honduras, which is equal to about 55° of mean average temperature.

III. This section may be understood as coinciding with the meridian of 89° 10' lon. W. from Greenwich, or 12° 10' W. from Washington. It commences at the precise point where Section II. terminates, *i. e.*, at

Santa Rosa, Department of Gracias in Honduras, and extends thence, nearly due south, across the State of San Salvador to the Pacific Ocean. It exhibits a longitudinal profile of the valley or plain of Sensenti, as also a transverse section of the valley of the River Lempa, which may be understood as extending from the Pass of Monte Redondo to the crest of the volcanic range which intervenes between the true Cordilleras and the Pacific Ocean. The features illustrated by this section will be more fully explained when we come to speak specifically of the physical conformation of San Salvador.

It will of course be understood that these sections are only approximations in respect of horizontal distances, and that the general elevations, except at ruling points, are also laid down approximately. Any thing beyond these, in a general reconnaissance of a diversified country, is impossible.

Topographically, therefore, Honduras has the greatest diversity of surface and of elevation; broad alluvions, fertile valleys, wide and elevated plains, and mountains terraced to their summits, collectively affording almost every possible variety of climate, soil, and production. These are conditions favorable to nurturing and sustaining a large population, and point unerringly to the ultimate, if not the speedy development here of a rich and powerful state. A stable and liberal government, which shall make the material interests of the country its primary care, with the opening of new and improved means of communication, can not fail to attract to Honduras an emigration from effete and distracted Europe relatively not inferior to that which flows in a constant and increasing flood upon the shores of the United States.

CHAPTER V.

RIVERS, LAKES, AND LAGOONS.

THE rivers of Honduras are numerous; some of them of large size, and deserving of a particular notice. The Chamelicon, Ulua, Aguan or Roman, Tinto or Black River, Patuca, and Wanks or Segovia, flowing into the North Sea, and the Choluteca, Nacame, and Goascoran, flowing into the Bay of Fonseca, are the most important. Of these, the Ulua, Aguan, Tinto, Patuca, Segovia, and Choluteca are naturally capable of navigation, to a greater or less extent, for vessels propelled by steam.

River Chamelicon.—The Chamelicon is a long stream, but drains a comparatively narrow section of country, and consequently does not pass a very large body of water. It is, moreover, rapid and full of shallows.

River Ulua.—The Ulua, on the other hand, which is the largest river in Honduras, drains a wide expanse of territory, comprehending nearly one third of the entire state, and probably discharges a greater amount of water into the sea than any other river of Central America, the Wanks or Segovia perhaps excepted. Its principal tributaries are the Santiago, Santa Barbara, Blanco, Humuya, and Sulaco, and below their point of junction it is a majestic stream. It appears, from the reconnaissance of Lieutenant Jeffers, that it has a bar at its mouth, on which there is but nine feet of water, but which, except during the prevalence of high winds, may be passed by vessels drawing seven

feet. Light-draught steamers can ascend as far as the junction with the Humuya, and in the rainy season pass up this stream to its union with the Sulaco. It is also said that similar vessels may ascend the Santiago to a point some distance above its junction with the Sta. Barbara. Where the Santiago is crossed by the road leading from Yojoa to Omoa, it is a deep and wide stream, with from eight to twelve feet of water in its channel. The Rio Blanco is narrow, but deep, and could be used advantageously as a means of local communication. The capacity of the Lake of Yojoa or Taulebé, with which it communicates, is not well known. Accounts differ widely as to its length and breadth, but all concur in representing it to be of great depth. Don José de la Valle is said to have written a memoir on the practicability of opening a communication for river craft between this lake, *via* Rio Ulua, and the sea.

Altogether, the Ulua and its tributaries offer many facilities for water communication with the interior, which can not fail to be made useful as the resources of the country become developed. Nor is it impossible—on the contrary, from the volume of water which passes through them, it is more than probable—that both the Chamelicon and Santiago may be artificially improved so as to answer an adequate purpose in bringing down to the coast and to a market the valuable products of the naturally rich departments of Sta. Barbara and Gracias. But, should this anticipation not be verified, it is certain that the valleys of these rivers offer facilities for the construction of carriage or rail-roads whenever circumstances shall require their substitution for the present slow and expensive method of transportation on mules.

In regard to the Ulua, it may be added that there is a cove a little to the eastward of its mouth, which extends to within two hundred yards of the river. Here vessels may enter and land with comparative ease and safety. In case any traffic should be opened by means of the Ulua, this cove might answer the purposes of a harbor, and obviate the necessity of passing the bar. Blunt, in his "Coast Pilot," observes, "The River Ulua is large and deep, and in front of it is an anchorage on excellent holding-ground." The Ulua, from the junction of the Santiago or Venta, flows through a plain of great extent, which was called by the conquerors the plain of Sula. The soil on its banks is of extreme fertility. During the height of the rainy season, some portions of the country to the eastward of the river are overflowed, as also portions of the lands between it and the Chamelicon. Indeed, at this time the waters of the two streams frequently intermingle.

River Aguan.—Rio Aguan, or Roman River, is a large stream, rising in the Mountains of Sulaco, and falling into the sea a little to the eastward of Truxillo. Its total length is about one hundred and twenty miles. Its largest tributary is the River Mangualil, celebrated for its auriferous sands and extensive gold-washings. In its course, it flows past the town of San Jorge Olanchito, through the rich valley of the same name, and the equally rich valley of Sonaguera. The portion of Honduras lying around its sources and on its banks is unsurpassed by any portion of the world for its fertility, its valuable woods, mineral, and other products. It is reported to have a comparatively favorable bar (carrying from five to seven feet of water), and to be practicable for boats of light draught for eighty miles.

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Its capacity for purposes of transportation is a question of much interest, for reasons which are obvious from what has been said of the resources of the country which adjoins it.

Rio Tinto, Negro or Black River, which, a short distance from the sea, takes the name of Poyer, Poyas, or Polyer River, is a considerable stream, and is said to have a course of about one hundred and twenty miles. In common with most of the rivers on the coast, it has a bad, variable bar at its mouth, on which the water ranges, at different seasons, at from five to nine feet. Small vessels may ascend from forty to sixty miles. It was on this river that the English had a fort and some settlements during the last century, which were, however, evacuated in 1786, in conformity with the treaty that year negotiated between England and Spain. Subsequent attempts were made to found permanent establishments there, one under the auspices of "the Cazique of Poyas," Sir Gregor M'Gregor, and another in 1839-41 by an English company, under the countenance of the British settlement at Belize, but all have proved signal failures.* The last adventurers named the district "Province Victoria," and made an unimportant establishment, to which they gave the name of

* The plans of M'Gregor, although shallow in their inception and poorly combined, nevertheless dazzled the imaginations of a considerable number of unreflecting persons, and his agents were able to dispose of many shares in the imaginary kingdom of Poyas. In furtherance of the scheme, a work was published in London, in the year 1822, entitled, "*Sketch of the Mosquito Shore, including the Territory of Poyas, etc., by Thomas Strangeways, K. G. C., etc.,*" which contains some valuable information, chiefly drawn from miscellaneous sources, upon the character and products of the country. It appears that "M'Gregor, cazique of Poyas," set up pretensions not only to what is known as the Mosquito Shore, but to the fine islands in the Bay of Honduras. A pamphlet, without date, was published in London, entitled, "*Constitution de la Nation Poyaisienne dans l'Amerique Centrale,*" which commences, "Gregor, par la grâce de Dieu, Cacique de Poyais;" and concludes, "in the year of grace 1825, and of our reign the sixth."

Fort Wellington. An account of this expedition was written by Thomas Young, a person connected with it in some official capacity, which conveys considerable information concerning this portion of the coast. He describes that portion of the stream called Rio Tinto as flowing through a low, but rich and densely-wooded country, which, a few miles higher up, becomes swampy, and covered with willow-trees. At the point where a branch of the main stream diverges to connect with the Criba, or Black River Lagoon, commences the savanna and pine-ridge country, where some Sambos have a settlement. The savanna supports a few cattle, but the land is poor, and unfit for cultivation; "but, notwithstanding its aridity, it is very beautiful. It extends several miles in every direction, and appears to have been laid out by some landscape gardener. It is relieved by clumps of paper-trees and low shrubbery, which are the haunts of many deer. There are also great quantities of lofty pine-trees. Some of the pine-ridges on this coast are very extensive, and are valuable for their timber, which is the red pitch-pine, rich in turpentine. This timber, from its length and straightness, is not only very useful for building, but also for masts and spars. In the pine-ridges, many mounds of earth rise above the level surface to the height of eight or ten feet, and have broad tops large enough for dwelling-houses. Some parts of the savanna, however, are swampy, and are the nurseries of an-

Article IV. divides the kingdom of Poyas into twelve provinces, viz. :

Island	of Roatan.	Province of Neustria.
"	" Guanaja.	" " Panamaker.
Province of Caribbania.		" " Towkas.
"	" Romaine.	" " Cackeras.
"	" Tinto.	" " Wolwas.
"	" Carthage.	" " Ramas.

noying insects.”* Above this pine-ridge the river is bordered by a continuous “bush,” relieved higher up by many gracefully-bending bamboos, and the tall cabbage-palm, the crown of which affords food, and the straight trunk, when split, boards for native buildings. At a point sixteen miles above the mouth of the river, the English anciently had an establishment, and here the sarsaparilla and cacao begin to make their appearance. Near this point had been anciently a coffee plantation, at a place called “Lowry Hill,” and near by had been a sugar estate, the boilers for which still remained at the time of Young’s visit. “Thousands of banana-trees, loaded with fruit, were growing spontaneously.” The ground here becomes elevated, and the Poyer, or Sugar-loaf Peak, two thousand feet high, shuts off the view seaward. Up to the “Embarcadero” the river is much obstructed by snags, which, even in small boats, it is difficult to avoid. Young adds, that “the passage from Fort Wellington to the Embarcadero, during a flood in the river, takes a pitpan, with six men, three days and a half. The descent, under similar circumstances, can be made in a day and a half.” The Embarcadero is estimated by Roberts (Strangeways following his authority) as ninety miles from the sea, but this is probably an over-estimate.

In the Poyas River proper the snags are not numerous, but the current is strong. The mahogany, which has been cut off below, begins to appear. The scenery also changes, the banks becoming high and rocky, and the beds of the stream studded with sunken rocks. The river now begins to wind among what are called the Poyer Hills or Mountains, and little is known of its character beyond that it is rapid and tortuous. At

* Young’s Narrative, p. 91.

some point above the Embarcadero it divides into two principal branches, respectively called Agalta and Paon. This point is represented by Señor Herrera, Gefé Politico of the Department of Olancho, who went down the Paon and Poyas in 1840, as "thirty-five leagues from the valley of Olancho, the path lying through steep and broken mountains, and crossing the Paon not less than seventy-three times—a river," he adds, "of much water, and very stony." He reported emphatically against any attempt to open communication between the settled districts of Olancho and the sea by way of the Poyas River and its branches.

The Poyas Indians have a number of settlements among the hills of the same name, on the upper tributaries of this river. Young reports the land about the Poyer Hills as exceedingly fertile, and the country healthy.

Black River Lagoon, called Criba by the Spaniards, according to Roberts, who visited it, is about fifteen miles long by seven wide. It contains several small islands, which were cultivated during the English occupation of Black River. At this period they erected considerable works of defense, which were enlarged by the Spaniards after the English evacuation, the ruins of which are still conspicuous. On the borders of the lagoon are some extensive savannas and pine-ridges, from which the former settlers obtained considerable quantities of pitch, tar, and turpentine.

The Patook River (written *Patuca* by the Spaniards) enters the sea by a principal mouth about midway between Cartine (also called by the Spaniards Brus, and by the English Brewer's) and Cartago, or Carataska Lagoons. It appears to be the largest river on the entire northern coast of Honduras, between the Ulua

and Herbias, or Cape Gracias á Dios Rivers. It takes its rise in the very heart of the Department of Olancho, in the vicinity of the large Spanish town of Juticalpa (capital of the department), and the great Indian town of Catacamas. The principal streams which unite to form the Patuca are the rivers Jalan, Tinto de Olancho, and the Guyape (or Guallape) and Guallambre. The two last named are celebrated for their extensive gold washings, to which reference is elsewhere made. The geographical basin in which this river collects its waters is one of the richest and most beautiful in all Central America. It is separated from the transverse valley of the Rio Herbias or Segovia by a high, narrow chain of mountains, steep on the south, but subsiding by terraces toward the north. Señor Herrera, in his report already alluded to, states that the Patuca is navigable for canoes as high as the junction of the Jalan with the Guyape. The river, however, above the coast alluvions has a powerful current, and is interrupted by rapids called "chiflones." At the mouth of the Guallambre is what is called Puerto de Delon; below this point are numerous "chiflones," the principal of which are those of Campanera and Caoba. At one point the river is compressed between high, precipitous walls of rock for a long distance. The place is called "*Portal del Infierno*," or Hell's Mouth, and probably gave rise to the story recorded by Roberts, "that at one part of its course the river has forced its way through a range of hills, one of which is completely excavated by the stream, which thus passes through a natural arch, as through a cavern, for a distance of nearly five hundred yards."* The principal affluents below the Guallambre are the following, in

* Roberts's Narrative, p. 159.

the Poyas dialect, viz., Rio Guineo, Rio Cuyamel, Rio Amac-was (River of Bee-hives), Rio Was-pres-senia (Roaring Water), Rio Uampu, and Rio Upurra (River of Retreat).

The principal mouth of the Patuca opens directly into the sea, and is obstructed by a bad, shifting bar, on which there is generally from eight to ten feet of water. Sometimes, after heavy gales, it is deeper. The tide, which is slight, nevertheless ebbs and flows in the river for some miles. The land about the mouth of the river is mostly savanna, which, however, according to an account given in 1844 by Messrs. Haly, Upton, and Deacon, unlike most of the savannas on the coast, is not swampy, and furthermore has a black and fertile soil. An extensive pine-ridge is found about thirty miles up the river, above which, as also down to near the sea, the banks are thickly wooded, having a great variety of soil—red clay, loam, and black mould—all admirably adapted to the cultivation of sugar, coffee, cotton, cacao, indigo, etc. Large quantities of mahogany, cedar, rose, and Santa Maria wood are found throughout the whole length of the river valley, while the pine-ridges are capable of furnishing inexhaustible quantities of pine wood and oak. Exclusive of valuable woods, the forests produce abundance of sarsaparilla, India rubber, gum copal, and vanilla. Mr. Haly pronounces the Patuca “navigable for small steamers” to the vicinity of the Spanish settlements in Olancho, “or at least to the foot of the falls” (*Portal del Infierno*), and that “it is the best river on the entire coast, excepting that of San Juan de Nicaragua, for commercial intercourse with the interior.” He thinks, also, that an establishment at its mouth, supported by improvements in the river and by roads in the interior, would

soon become the most important point on the coast east of Omoa. According to Haly, it takes *seventeen days* to ascend the river to the Spanish settlements in Olancho, which implies that the current must be very strong and navigation far from easy. He estimates a day's voyage up the stream at thirty miles, and adds that "the Spanish towns are therefore five hundred and ten miles above the mouth of the river." This estimate is simply absurd, as that distance in the direction of the course of the river would carry the traveler not only across the continent, but far out of sight of land in the Pacific Ocean! As I have already observed, distances in Central America are always overestimated, or, to use a saying of the country, "depend upon the quality of your horse." In other words, what is five leagues with a good animal is ten with a bad one. Roberts, more moderate, estimates the length of the Patuca at one hundred and fifty miles, and Strangeways at one hundred miles. Various establishments of Caribs and Sambos exist on the lower part of the river, and the Toacas and Poyas (called Payas by the Spaniards) on its upper waters and its various tributaries.

An arm of the Patuca, called Toomtoom Creek, diverging from the main stream a short distance above its mouth, connects it with Brus, or Brewer's Lagoon. This lagoon has a wide mouth, but will not admit vessels drawing more than six or seven feet. Three or four miles from its entrance is an island of moderate height, about two miles in circumference, fertile, formerly fortified by the English, and seems to have been extensively cultivated. This lagoon abounds with fine fish, has plenty of water-fowl, and large beds of oysters. "The country to the northward," says Roberts, "is beautifully

diversified by gently-rising hills, valleys, and savannas, and the soil, generally speaking, is excellent."

Carataska or *Cartago Lagoon* "is of very considerable extent, varying in breadth, and having, in some places, the appearance of several lagoons running into each other, in various directions, for the most part parallel to the coast, but nowhere exceeding twelve miles in breadth." It has two entrances, one a small creek called "Tibacunta." The principal mouth is wide, with thirteen to fourteen feet of water on the bar. The lagoon is estimated at about thirty-six miles in length. It is for the most part shallow, varying in depth from six to twelve and eighteen feet. Captain Henderson, who visited it in 1804, describes the country near the Sambo village of Crata (Croatch or Cartago) as "a spacious savanna, of very considerable extent, forming an entire level of unbroken verdure and finest pasturage, skirted on one side by the waters of the lagoon, and on the other bounded by gently-rising hills. The clumps of pine and other lofty trees, interspersed at pleasing distances over the whole, gave the view all the appearance of cultivated art, and afforded a most agreeable relief to the eye." Several small streams discharge into the lagoon from the south, viz., Ibentara, Cartago, Locca, Warunta, and Kaukari. It has also three considerable islands. There are a number of villages of Sambos around this lagoon, who raise a few cattle, but do not cultivate the soil to any extent, being grossly indolent and improvident. "The land in the vicinity of the lagoon," according to Roberts, "consists almost entirely of extensive and beautiful savannas, covered with the finest pasturage, and abounding in deer and other game. There are few pine-trees at Crata, but on the opposite or south side there are ridges grow-

ing timber as large as any on the coast. Behind these ridges the savannas are bounded by hills, whose summits are covered by the most luxuriant vegetation. On the banks of the streams in the interior there is excellent mahogany, and cedar of the finest quality and largest size. Pimento and various other valuable plants are also indigenous."

Rio Wanks or *Segovia* (also called *Herbias*, *Yare*, *Cape*, *Coco*, and *Oro*), which enters the sea at *Cape Gracias á Dios*, is certainly the longest, if not in other respects the largest, river in Central America. It rises in the Department of *Nueva Segovia*, in the extreme northwest corner of *Nicaragua*, within fifty miles of the *Bay of Fonseca*, and flows northeast into the *Caribbean Sea*. For the greater part of its course it is the boundary between *Honduras* and *Nicaragua*. Its total length can not be less than three hundred and fifty miles. For two hundred and fifty miles above its mouth it flows through an almost unbroken wilderness, among high mountains, and for a great part of its way in a rapid current over a very broken and rocky bed. It is nevertheless occasionally navigated by canoes to within a few leagues of the town of *Ocotal* (or *Nueva Segovia*). Señor *Don Francisco Irias*, of the town of *Ocotal*, descended it in 1842 in a canoe, and returned by the same means. He started from a place called *Coco*, which, from his account, appears to be not far from *Ocotal*. From that point to another called *Pailla*, he represents the river as not much obstructed. "Just above *Pailla* there falls into the principal river a large and beautiful stream, called *Bocay*, the mouth of which is near that of the large river *Pantasma*, which enters from the right. There are other medium-sized tributaries, among which is the *Poteca*, rising on the left

base of the mountains bounding the great valley of Jalapa, at a point called Macarali. The Poteca is too rough for navigation. There is also another stream, called Coa, which flows from the south, among high and steep mountains. It abounds in fish, and the forest which borders it is rich in honey, and also in valuable woods."

Below Pailla commence a series of rapids or falls, which follow each other in quick succession, some of which can only be passed by unloading the canoes and carrying them over land. "These are the sole obstructions," continues Señor Irias, "to the navigation of the river from the point of embarkation to the sea at Cape Gracias á Dios. At present, the descent occupies about ten days. Two days are taken up in descending the rapids, and four in ascending them. It will be observed that only about one fifth of the river is in any way obstructed. The delay in the voyage is chiefly occasioned by unloading and loading at some of the rapids. From Tilras and Quipispe, the final rapids, to the Cape, there is scarcely any current, and it is necessary to use the oars. This part of the country through which the river passes is very beautiful, consisting of open plains covered with grass and scattered trees. It is well adapted for grazing, and cattle and horses might be raised here for exportation to Cuba and Jamaica. * * In ascending the river from the Cape, I was occupied twenty days. * * Cape Gracias á Dios unfortunately has no commerce, but it has a favorable and picturesque situation. It has in front a salt lagoon of great capacity, separated from the sea by a sandy strip of land covered with mangrove-trees. The entrance is to the south. * * It is lamentable that so beautiful a section as that

around the Cape should have no other population except a few worthless Moscos (Mosquitos or Sambos), unable from want of instruction, as unfitted by disposition, to attain to any improvement in the future."

In 1688, a body of French and English pirates, about three hundred in number, abandoned their vessels in the Gulf of Fonseca, forced their way across the continent, through Nueva Segovia, and down this river to Cape Gracias. They descended the stream on small rafts, which they called "*pipiries*, pitiful machines," each supporting two or three men. Many were drowned in the descent, of which De Lussan, one of the leaders, has left us an animated, though perhaps somewhat exaggerated description. He says: "This river springs in the Mountains of Segovia, and discharges itself into the North Sea at Cape *Gracias á Dios*, after having run a very long way in a most rapid manner oee a vast number of Rocks of prodigious bigness, and by the most frightful Precipices that can be thought of, besides a great many Falls of Water to the Number of at least an Hundred of all sorts, which it's impossible for a Man to look on without trembling, and making the Head of the most fearless to turn round, when he sees and hears the Water fall from such an height into these tremendous Whirlpools. In short, the whole is so formidable that there are none but those who have some Experience can have right conceptions of it. But for me, who have passed these Places, and who, as long as I live, shall have my mind filled with these Risques I have run, it's impossible I should give such an Idea hereof but what will come far short of what I have really known of them."*

* *A Journal of a Voyage made into the South Sea by the Bucaniers or Freebooters of America*, by the Sieur Raveneau de Lussan, London, 1704, p. 171.

De Lussan speaks of the large quantities of bananas which they found on the banks of the river, "which kept them from starving," for, although there was "very good game," their "powder was wet, so that they could not go a Hunting." He describes the lower part of the river as "very good, and the stream very gentle."

Roberts, who spent some months at Cape Gracias, describes "the soil in that neighborhood as very poor, and, with the exception of a few spots, on which there are small patches of cassava, incapable of producing any thing better than a coarse, rank grass, fit, however, for pasturage." The few people who live there depend upon those who dwell a considerable way up the river for their supply of plantains, maize, and other provisions. Game is scarce, and there is a deficiency of good water, so that the Cape presents no advantages for an agricultural settlement, although holding out inducements for grazing establishments and commerce.

The river enters the ocean some distance to the northward of the bay or harbor, with which, however, it is connected by a creek or shallow canal, passable for canoes, and which might be deepened so as to enable small vessels to avoid the dangerous bar of the river itself, on which there is seldom more than four or five feet of water. "For forty or fifty miles above its mouth," continues Roberts, "the land is low, sandy, and poor, with occasional ridges of pitch pine, and some patches of good mould." There is little doubt that the Rio Segovia might be made to answer a useful purpose in the development of the country.

Three rivers of note flow from the interior of Honduras southward into the Pacific. These are the Goascoran, Nacaome, and Choluteca. The last named is

much the largest. It rises in the Lepaterique Mountains, at the head of the plain of Comayagua, flows eastward until it reaches the meridian of Tegucigalpa, then turns abruptly north, flowing past that city, and after describing a circuitous course, runs nearly south into the Gulf of Fonseca, having a total length of about one hundred and fifty miles. Its course illustrates what I have already said of the peculiarities of the mountain groups of Honduras. The Lepaterique Mountains become *knotted* and much broken up in the great bend of this river, which embraces one of the richest mineral districts of Central America. The mines of Yuscuran, San Antonio Mineral, Sta. Lucia, San Juan Cantaranas, etc., all lie within this bend. The valley of the Choluteca is narrow until it reaches the point where it takes a southern direction, whence it gradually expands into broad alluvions on the gulf. In the midst of these alluvions is situated the town of Choluteca (anciently Xeres de la Frontera), a place of considerable size. The Yuguare is a tributary of the Choluteca. It flows through a broad valley, distinguished, even in Honduras, for its beauty and fertility. "Bongos," and other native boats of light draught, ascend the Choluteca to considerable distances. Indeed, the river, for ten or twelve miles from the gulf, can only be regarded as an estuary. Its banks, throughout the lower part of its course, are well wooded with cedar, mahogany, and other trees, the value of which is much enhanced by the facility with which they may be reached from the sea. The river will be of great utility in working the numerous rich silver mines which are found in the vicinity of Corpus, and in the hills which skirt its valley.

The Rio Nacaome collects its waters on the south side of the Lepaterique Mountains, while the Choluteca

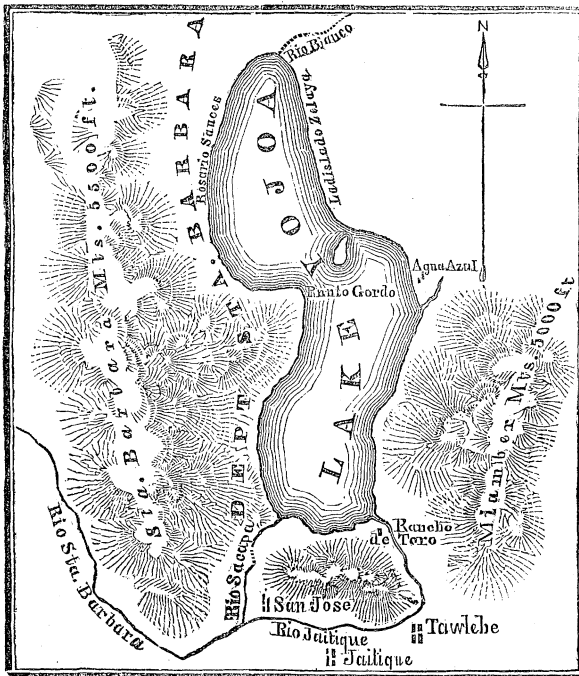
drains their northern slope. It is not a long stream, but passes a considerable body of water. It is very rapid, and is not available for purposes of navigation except during the rainy season, when it may be ascended by canoes as high as the town of Nacaome. Below that place it flows through alluvions; and above, to the town of Pespiri, it has a broad valley. Beyond that point it finds its way in deep gorges among the hills and mountains. Its principal tributary is the Moramulca.

The River Goascoran rises among the low hills which lie at the head of the great plain of Comayagua, and its valley may almost be regarded as a prolongation of this plain. It has its sources in the same savannas with those of the Humuya, which flows northward into the Bay of Honduras. Its course is nearly due south, and, in conjunction with the River Humuya, it opens a great transverse valley, completely cutting through the Cordilleras, and extending from sea to sea. From this circumstance it derives its principal importance. Its valley consists of a succession of terraces, of greater or less width, with no alluvions proper until within ten miles of the Gulf of Fonseca, where the ground spreads out in a broad, low, and fertile plain. At Caridad, where the river breaks through the Lepaterique Mountains, the valley is much compressed, but this is only for a few hundred yards. The first town on the river is Goascoran, above which occur Aramacina, Saco, Caridad, San Antonio del Norte, Aguanque-terique, and San Juan. The entire length of the Goascoran is between seventy and eighty miles. During the rainy season it passes a large body of water, but during the dry season it can every where be forded without difficulty. It could doubtless be made naviga-

ble as far as the town of Goascoran by artificial aids, but naturally it can not be regarded as a navigable river. From the Gulf upward to the Rio Pescado, which enters it from the west, a few miles below Caridad, it constitutes the boundary between the states of San Salvador and Honduras. The principal importance of this stream, as already intimated, consists in its dependence on the plain of Comayagua, whereby a favorable railway route is opened between the two seas.

NOTE.

Lake of Yojoa.—The Lake of Yojoa, or Taulebé, is the only lake of note in Honduras. Very little was known of its extent or character until visited by Lieutenant Colonel Stanton, R. E., under the auspices of the Honduras Railway Company, in February of the present year (1858). The subjoined approximate map of the lake was made by Colonel Stanton. It is about twenty-five



LAKE YOJOA, OR TAULEBÉ.

miles in length by from five to eight broad, with an average depth of from three to four fathoms. It is elevated 2050 feet above the sea, and is 85 feet higher than the site of the city of Comayagua. Although, in the first edition of this work, I expressed great distrust of the statement that this lake had more than one outlet, yet the observations of Colonel Stanton and Mr. Edwards show conclusively that it has three. From the southern extremity of the lake, which is here about eight miles broad, flow out two large streams, the Rio Jaitique and the Rio Sacapa, which join each other fifteen miles from the lake, forming the Rio Santa Barbara, an affluent of the Rio Venta. Of these two streams the Jaitique is much the largest, in many parts navigable for canoes, but the Sacapa has the singular feature of flowing for upward of a mile under ground. The subterranean passage commences about two miles from the lake. The third outlet of the lake flows from its northern extremity, and is called Rio Blanco, a narrow, but deep and rapid stream, falling into the Rio Humuya. Half a mile from its point of *débouchure* the Rio Blanco also enters a subterranean passage, flowing for a mile and a half under ground. Nor do the singular features of the lake terminate with this enumeration. On its right (northeast) shore there is a large hacienda, called "Hacienda de Agua Azul," within the boundaries of which an immense spring of clear blue water, seventy-five feet in diameter, rushes from the earth, supplying a stream which flows into the lake quite equal in volume with any of its outlets. This spring, and the circumstance that both the Sacapa and Blanco flow through subterranean passages, favor the belief that limestone is the predominant geological feature of the country; but upon this point I have no information. It is said that the lake abounds in fish, and that, during the prevalence of northers, its waves run with great force, utterly preventing the passage of canoes. The country immediately around the southern extremity of the lake is low and swampy, but beyond, and in the neighborhood of Taulebé and San José, it spreads out in beautiful plains and valleys of the greatest fertility. Between these and the plain of Comayagua lies the high plateau of Siguatepeque, 3600 feet above the sea, from two to five miles broad, and thirty miles long. Mr. Edwards affirms that its climate is temperate, the blackberry or bramble of our country abounding every where, and the soil fertile and capable of producing wheat, potatoes, and the various products of temperate latitudes.

Altogether, therefore, Lake Yojoa presents more singular and interesting features than any other body of water either in North or Central America, and deserves a closer examination than Colonel Stanton or Mr. Edwards could give. With the prosecution of the proposed railway, it will, without doubt, be minutely surveyed and described. Meantime, the above map may be relied upon as very nearly, if not absolutely accurate.

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CHAPTER VI.

BAYS, PORTS, AND HARBORS.

THE Bay of Fonseca, sometimes called *Golfo de Amapala*, or *Conchagua*, is beyond dispute one of the finest ports, or, rather, "constellation of ports," on the entire Pacific coast of this continent. It is upward of fifty miles in greatest length, by about thirty miles in average width. A reference to the accompanying chart, reduced from a survey made by Captain Sir Edward Belcher, R. N., in 1838, will explain its peculiarities better than any description. It will be seen from the general map that this bay lies within the great longitudinal valley which intervenes between the volcanic coast-ridge and the true Cordilleras, and which extends from Guatemala to Costa Rica. In San Salvador this valley is drained by the River Lempa, which breaks abruptly through the coast-ridge and flows into the Pacific. In Nicaragua the same valley is represented by the basin of the Nicaragua lakes, drained by the River San Juan, which breaks as abruptly through the Cordilleras and flows into the Atlantic. Intermediately between San Salvador and Nicaragua, it is farther represented by the Bay of Fonseca, where the sea has broken through the volcanic coast-range, and spread itself out behind it. The bay, no doubt, owes its origin to volcanic causes, and its study, under this aspect, must hereafter prove of the highest interest to science.

The entrance to the bay, from the sea, is about eight-

een miles wide, between the great volcanoes of Conchagua (3800 feet in height) and Coseguina (3000 feet in height), which stand like giant warders upon either hand, and constitute unmistakable landmarks for the mariner. On a line across this entrance, and about equidistant from each other, lie the two considerable islands of Conchaguita and Mianguera, and a collection of high rocks called "los Farellones," which, while they serve to protect the bay from the swell of the sea, divide the entrance into four distinct channels, each of sufficient depth of water to admit the passage of the largest vessels. These islands are high; Conchaguita being not less than 1500, and Mianguera about 1200 feet in height. They were formerly inhabited by Indians, who withdrew to the main land to avoid the oppressions of the freebooters during the period of their ascendancy in the South Sea. Both of these islands belong to San Salvador.

The three states of San Salvador, Honduras, and Nicaragua touch upon this bay. Honduras has, however, much the largest frontage. The port of La Union, on the subordinate bay of the same name, is the principal Pacific port of San Salvador. Nicaragua has also a nominal port on the "Estero Real," an estuary of the bay, which penetrates that state in the direction of the Lake of Managua. Honduras has the free port of Amapala on the island of Tigre, which occupies a commanding position nearly in the centre of the bay.

The subordinate bay of La Union, from the island of Punta Sacate to its head, is about eight miles in length by four in breadth. Its northern half, however, is shallow, and almost dry at low water, and it is said that the anchorage is yearly becoming narrower from the sand washed down by the rivers Goascoran and Si-

rama, both of which flow into it. There are also two other subordinate bays, viz., that of Chismuyo, to the northward of the large island of Sacate Grande, and which receives the Rio Nacaome, and that of San Lorenzo, a fine body of water to the eastward of the same island. At the head of this bay is situated the nominal port of San Lorenzo, which is only a dependency of that of Amapala. The principal estuary of the bay is that called "El Estero Real," which extends into Nicaragua behind the volcano of El Viejo. It starts from the extreme southern point of the bay, and penetrates inland for a distance, including its windings, of not far from fifty miles. It has an average width of two hundred yards, and, for at least thirty miles from its mouth, a depth of not less than three fathoms. Sir Edward Belcher went up this estero in 1838, in the "Starling," a vessel drawing ten feet of water, for thirty miles. In his own language, he "might easily have gone farther, had the wind permitted." This estero extends to within twenty or twenty-five miles of Lake Managua, from which it is separated by the plain of *Conejo*.*

The principal islands in the Bay of Fonseca are Sacate Grande, Tigre, Gueguensi, and Esposescion, belonging to Honduras, and Punta Sacate, Martin Perez, Conchaguita, and Mianguera (already described), belonging to San Salvador.

Sacate Grande is considerably the largest, and, in common with the others, is of volcanic origin. It is seven miles long by about four in breadth. The southern half is elevated, rising in a number of peaks to the

* I have elsewhere indicated this line as the most feasible route for a ship canal, via the River San Juan and Lakes Nicaragua and Managua. See Part III. of "*Nicaragua, its People, Scenery, Monuments, and proposed Inter-oceanic Canal.*"

height of two thousand feet. These elevations slope off gently to the northward, and subside finally in level alluvial grounds of exceeding fertility. These, as well as the slopes descending toward them, are densely wooded with cedar, mahogany, willowist, and other valuable trees. The peaks themselves, as well as their more abrupt southern slopes, are covered with grass, called by the Indians *sacate*, whence the island derives its name. These grassy slopes afford pasturage for great numbers of cattle, and it is said that as many as four thousand have been pastured upon the island at a single time. For most of the year, and except in very dry seasons, there are running streams of water on the northern slopes of the island. Abundance of water, however, may be obtained by digging through the upper lava crusts, beneath which, as is frequently the case in volcanic countries, flow constant streams. The grassy peaks of Sacate Grande, as well as of the other islands, afford a source of ever-varying and eternal beauty. With the commencement of the rainy season, they are clothed with the delicate translucent green of the springing grass, which deepens as the season advances both in color and thickness, until all the asperities of the ground are matted over with an emerald robe of luxuriance. Then, when the rains cease and the droughts commence, the grass becomes sere, and finally of a brilliant yellow, and the islands appear as if swathed in a mantle of golden grain, which Ceres herself might envy. Then comes the torch of the *vaquéro*, and the sky is lurid with the blaze of the rapid flame, which clears the ground for the future fresh and tender blade, but leaves it browned and purpled, in sober contrast with its previous gayer garniture of gold and green.

The island of Gueguensi may be regarded as a de-

pendency of Sacate Grande, from which it is separated only by a narrow and shallow strait. It has a single eminence of great beauty and regularity. The rest of the island is level, chiefly savanna, fertile, and well adapted to the cultivation of rice, cotton, and sugar. It is fringed by a narrow belt of mangroves, which would lead the careless observer to suppose the ground within to be low and swampy.

The island of Tigre, from its position, is the most important island of the bay. It is perhaps twenty miles in circumference, rising in the form of a perfect cone to the height of two thousand five hundred feet. The slope from the water, for some distance inward, is very gentle, and admits of cultivation. Upon the southern and eastern shores, the lava forms black, rocky barriers to the waves, varying in height from ten to eighty feet; but upon the northward and eastward there are a number of "playas" or coves, with smooth, sandy beaches. It is facing one of the most considerable of these that the port of Amapala is situated. The water in front is deep, with clear anchorage, where vessels of ordinary size may lie within a cable's length of the shore.

This island was a favorite resort of the pirates, and it was here that Drake had his depôt during his operations in the South Sea. At that time, in common with Sacate Grande, and the other principal islands in the bay, it had several considerable towns of Indians, who, however, soon afterward retired to the main land to avoid their piratical persecutors. From that time it remained almost entirely uninhabited until about 1838, when some enterprising merchants, under the suggestions of Don Carlos Dardano, a Sardinian trader, conceived the idea of making it a free port. They ac-

cordingly obtained the requisite action from the government of Honduras, and the free port of Amapala was accordingly established. Since then it has rapidly increased in population, and is now by far the most important point in the Gulf, and undoubtedly destined to become the most important port in the Pacific between San Francisco and Valparaiso. It has a salubrious climate, resulting from its admirable ventilation, the proximity of high grounds, and absence of swamps. The markets of three states are accessible from it, and it may be reached from the sea much more easily than any other point in the bay, while the largest vessels of the line may lie in perfect security in its waters. The actual population may be estimated at about one thousand. It contains several large wholesale mercantile establishments, with the requisite warehouses, and a number of substantial and commodious dwellings. A direct trade is carried on between Amapala and Bremen, Liverpool, Marseilles, Genoa, New York, and Valparaiso. No data exist for determining its extent or value. The exports are indigo, hides, tobacco, bullion, silver and copper ores, and Brazil-wood, together with maize to ports on the coast. The cultivation of sugar has been introduced on the main land, with a view of supplying the Californian market.

Lying in front of the port of Amapala, to the northwest of the island of Tigre, is the island of Esposicion. It is high, with a large "playa" on its southern side, but is deficient in water. This, however, might be supplied to every necessary extent by wells of the requisite capacity. The same remarks hold good in respect to the considerable island of Punta Sacate. The little island of Martin Perez is comparatively low and level, and has a rich, productive soil. It retains

its verdure during most of the year, and is green when the other islands are sere and yellow from the drought. The remaining islands, of which there are many, may be described as volcanic domes, supporting only enough soil to nourish the grasses which disguise the rough and blistered rocks of which they are composed.

The bay abounds in fish, and its shores swarm with every variety of water-fowl—cranes, herons, pelicans, ibises, spoonbills, ducks, curlews, darters, etc., etc. Large beds of oysters are found in the shallow waters in the dependent bays of La Union and Chismuyo. Their quantity seems to be inexhaustible. Huge piles of their shells are scattered along the shores of the islands and main land, showing how extensively they were used by the aborigines. They are about the size of the ordinary oysters found around New York, and of excellent flavor. Crabs and cray-fish are also abundant.

The whole region around this bay is eminently productive, and capable of furnishing supplies of every kind to every desirable extent. The lands on the banks of the Choluteca, Nacaome, and Goascoran are of the highest fertility, and adapted to the production of every tropical commodity. The savannas back of these comparatively low grounds are peculiarly fitted for grazing, while wheat, potatoes, and other products of the temperate zone may be cultivated on the slopes of the mountains and the plateaus of the interior. Wood of value for purposes of export or for the construction of dwellings and ships, including pine, exists in exhaustless quantities on the very shores of the bay, or may be rafted down the rivers from the interior. These rivers also afford facilities for navigation by small boats for considerable distances inland, to points

near the metal-bearing spurs or outliers of the Cordilleras. The silver and gold mining district of Tabanco, in the Department of San Miguel (San Salvador), the silver mines of Aramacina and San Martyn, and the famous mine of Corpus, all lie within from ten to twenty miles of this bay. Limestone is found in large beds on the navigable waters of the estero of Cubulero, and a fine rose-colored sandstone abounds in the vicinity of the town of Nacaome, on the banks of the river of the same name. This bay must also ultimately become the *dépôt* of the coal from the great beds which exist in the valley of the River Lempa, when these shall come to be worked for supplying the Pacific steamers. It is alleged that coal is to be found both on the Rio Sirama and Choluteca, but the reports remain to be verified.

As affording admirable ports, abundant means for ship-building and repairs, with supplies of every kind, not less than for its value in respect to existing and local commerce with San Salvador, Honduras, and Nicaragua, the Bay of Fonseca has a singular value and commercial importance. But our estimate of that importance becomes greatly enhanced when we consider its commanding position, both in a political and geographical point of view, and especially when we regard it, as it is inevitably destined to become, as the terminus on the Pacific of the most available route of permanent railway communication between the two great oceans. I have no hesitation in repeating now, what I had occasion to say to the government of the United States when acting as its representative in Central America, that "the Bay of Fonseca is, under every point of view, by far the most important position on the Pacific coast of America, and so favored by Nature as ultimately to

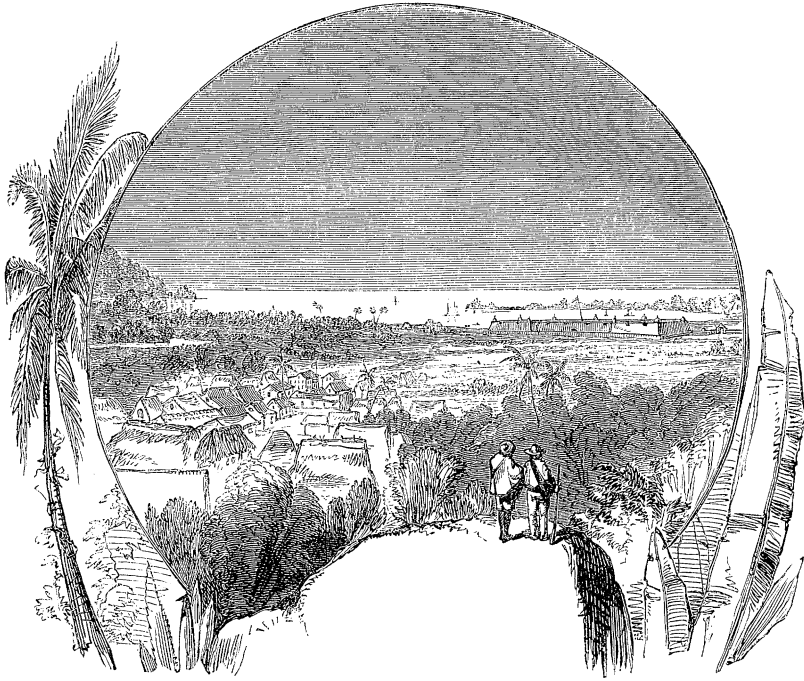
become the great emporium of trade, and centre of enterprise upon that side of the continent." This was written before the fact of a feasible interoceanic railway route through Honduras, terminating on this bay, had been demonstrated or even conceived.

The principal ports of Honduras, on the Atlantic, are Omoa, Puerto Caballos, and Truxillo; and on the Pacific, Amapala, or the island of Tigre.

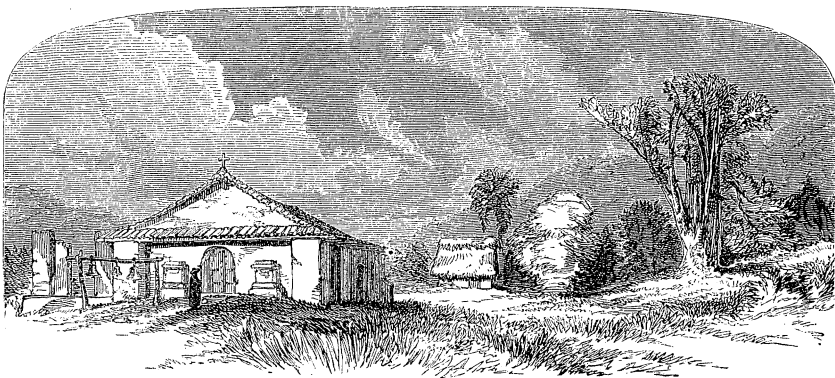
Puerto Caballos.—The first port established by the Spaniards on the northern coast was Puerto Caballos, lat. $15^{\circ} 49' N.$, and lon. $87^{\circ} 57' W.$ It was selected by Cortez in his expedition into Honduras, and he founded a settlement there, with the purpose of making it the grand *entrepôt* of New Spain, which he called Natividad. For more than two centuries it was the principal establishment on the coast, but it was removed to Omoa, a few miles to the westward, during the time of the buccaneers, because of the large size of the bay, which could only be adequately defended by the construction of several forts, while a single work was sufficient for the protection of the comparatively small port of Omoa.

The port, or rather bay, is of large capacity, being not less than nine miles in circumference. Its depth is ample, ranging, for more than two thirds of its area, from four to twelve fathoms, with secure holding-ground. Toward its northern shore the depth of water is greatest; and by the construction of docks sixty feet in length, the largest ocean steamers may enter, and receive and land passengers and cargo, more easily than in the docks of New York, inasmuch as, in this portion of the Bay of Honduras, the rise and fall of the tide is almost imperceptible.

Connected with the port or bay is a large salt-water



OMOA, FROM THE LAND.



CHURCH OF SANTIAGO, OMOA.

lagoon, upward of two miles in length, by about a mile and a quarter broad, of equal depth of water with the port itself.

The winds which prevail on the north coast of Honduras are from the northeast, north, and north by west, from all of which the port is perfectly protected. West and southwest winds are scarcely known, and are furthermore entirely cut off from the port by the high hills and mountains skirting the coast in that direction.

Omoa.—The port of Omoa is in lat. $15^{\circ} 47'$ N., long. $88^{\circ} 3'$ W. It is small but secure, and defended by a strong work, called "El Castillo de San Fernando." The anchorage is good, in from two to six fathoms. The town is situated about a fourth of a mile back from the shore, and numbers fifteen hundred or two thousand inhabitants. The site of the town is level, but the country back rises rapidly into a chain of high mountains, which, commencing abruptly at Puerto Caballos, trend off to the westward, and connect with the Sierra Madre in the Department of Gracias. Very little agriculture, therefore, is carried on in the vicinity of Omoa, which draws its supplies chiefly from the Indians settled around Puerto Caballos, and from the vicinity of Cheloma and San Pedro, in the plain of Sula. It is through Omoa that the merchants of Gracias, Sta. Barbara, Comayagua, and Tegucigalpa obtain their principal supplies of merchandise, and most of them have agencies at the port. Goods landed here, nevertheless, sometimes find their way across the continent into San Salvador and Guatemala. It is from this port, also, that most of the exports of the departments which I have indicated are made. They consist of bullion, mahogany, hides, tobacco, indigo, sarsaparilla, etc.; but the amounts of these articles which pass here, in the ab-

sence of published data, are unknown. A large number of cattle are shipped annually to supply the markets and the mahogany establishments around Belize with provisions and with oxen for trucking the mahogany.*

Omoa, from its position, receives the full ventilation afforded by the trade winds, and its climate in general is cool and salubrious. It has seldom been visited by those epidemics which so often desolate the islands of the Caribbean and the Mexican ports on the Gulf of Mexico. This exemption is no doubt due, in a great degree, to the proximity of the mountains, and the absence of marshes in its vicinity.

Omoa receives an abundant supply of fish, turtle, and wild fowl from the cays off the coast and the waters in its neighborhood.

Truxillo.—This ancient port is situated in lat. $15^{\circ} 55'$ N., long. 86° W., upon the western shore of a noble bay, formed by the projecting land of Punta Castilla. Young estimated the population in 1842 at two thousand five hundred, of which one thousand were whites and Ladinos, and fifteen hundred Caribs. The latter are described as tall, athletic, hardy, and industrious. The trade of the place is chiefly carried on

* "The harbor of Omoa is formed by a little bay, with a low sandy point stretching out about half a mile to the north, covered with mangrove-trees and bushes, which make a good shelter from the northern gales. The fort, or castle, stands at the head of the bay, near which is the best anchorage, in from four to sixteen fathoms of water. As you approach the shore it shallows, and you may choose your own depth, say from sixteen to four fathoms, soft, muddy bottom, and good holding-ground. In fine, it is a snug, safe harbor. The castle is large, and, like most other of the fortifications built by the Spaniards, very strong. When this province was under Spain, its convicts were imprisoned in this castle. The town is located about a mile to the eastward of the landing-place at the castle. It is now a small place, containing about two hundred indifferent houses. The people of Omoa generally are a simple-hearted, honest people, and wish to do justice and deal fairly with all foreigners who visit their place."—*Coggeshall's Voyages, 2d Series*, p. 142 (1852).

with Olancho, of which department it may be considered as the port. Its exports, in common with those of Omoa, are hides, sarsaparilla, cochineal, indigo, copper, and silver. The subjoined description of Truxillo is extracted from the Narrative of G. W. Montgomery, Esq., United States Commissioner to Central America, who visited it in the year 1838:*

“The town of Truxillo stands close by the sea, at the foot of a lofty mountain crowned with trees, and clothed with rich vegetation, reaching to the very edge of the water. It is an isolated, solitary place, of antique appearance, with a few houses, and these in ruinous condition. * * In former times, Truxillo was a place of some importance, both in a military and commercial point of view. It contained a considerable garrison, and the ruins of extensive barracks may yet be seen there. It carried on a flourishing trade with the metropolis, the manufactures of which were exchanged for the products of the country. Of these products the principal are mahogany, cedar, and other woods, sarsaparilla, hides, and tallow. There are also some mines of gold in the neighborhood, which, under proper management, might be worked with a profit. This place, however, has long been on the decline, and its prosperity is not likely to return in many years. Its population, which now does not much exceed a thousand souls, was formerly twice or three times that number.

“The principal street—and, strictly speaking, the only one, for the others scarcely deserve the name—extends from one end of the town to the other, and is paved. The houses, for the most part, are but one story high, and their sombre, dilapidated appearance, together with the grass-grown pavement, impart to the place a melancholy air of abandonment. It has, at the same time, something romantic in its situation, being inclosed by mountains, and imbosomed in an exuberant vegetation, which the efforts of man seem to have been unable to check.

* *Narrative of a Journey to Guatemala, etc., in 1838*, by G. W. Montgomery. New York, 1839, p. 31.

“There is scarcely any open ground in the vicinity, except here and there a cultivated spot, where the plantain, the yucca, and a little corn are raised for individual consumption. As the woods afford a rich pasture, the cattle are good, and milk is abundant; and as the soil, by its fertility, liberally repays the little labor bestowed on it, the very moderate wants of the inhabitants are easily supplied.

“During my stay in Truxillo, I took a ramble in the woods, accompanied by the captain of the vessel. There is a brook in the neighborhood of the town which pursues a winding course through the woods and among the rocks until it falls into the sea. We resolved to explore its banks as far as circumstances might permit. We set out accordingly, each of us armed with a stout stick, in the apprehension of encountering snakes. Indeed, so exaggerated were the accounts I had received of the number of these reptiles infesting the woods, that I had conceived it impossible to move a step without danger of being attacked by them. As we proceeded in our excursion, I was agreeably surprised by the beauty of the scenery. The size and loftiness of the trees, some of them in blossom, and the deep verdure of their foliage, surpassed any thing I had ever seen of the kind. There was the tamarind-tree, the wild lemon, loaded with fruit, and the sassafras. There, too, was the mahogany-tree, which, like the sassafras, furnishes a staple commodity of the country, and a variety of other trees, with whose properties and names we were wholly unacquainted. There was a vast number of plants, also, that seemed to me curious, and well worth the attention of a botanist. Parrots, pelicans, and other birds of brilliant plumage, were flying all around us; there were singing-birds among the trees, while in the limpid waters of the brook might be seen, now and then, the silvery sides of a fish glistening in the sun as it darted across the stream. The brook sometimes rushed and foamed noisily among groups of rocks or through narrow passes, and at other times glided peacefully on, with an almost imperceptible current. At one place a little bay was formed, deep and cool, where the smooth and placid surface of the water, which was beautifully transparent, reflected, as in a mirror, the overhanging trees. It was impossible not to be

affected by the solitude and beauty of the scene ; the charm was felt and acknowledged by my companion as well as myself. A pleasant breeze, blowing at the time, effectually prevented our being annoyed by mosquitoes ; and, singular as it seemed to me, we met with no snake, nor any dangerous animal in our path."

Puerto Sal is a small harbor a few miles to the eastward of Puerto Caballos. The depth of water is not sufficient for large vessels. Some high rocks lie to the northward of the point which shuts in the harbor, called the "Bishops," under the lee of which there is a very good anchorage.

Triunfo de la Cruz is a large bay, which commences at Puerto Sal, and bends thence inward, forming a coast-line of upward of twenty miles, terminating in a cape called Cabo Triunfo. It is very well sheltered from the winds, and has good anchorage for ships of every denomination.

Besides these harbors, there are many points on the north coast of Honduras where vessels may anchor under favorable circumstances. At the mouths of the Chamelicon, the Ulua, Lean, Black River, Patook River, and off Carataska Lagoon, there are roadsteads, with good holding-ground, which are secure, except during the prevalence of north winds.

The islands of Roatan and Guanaja both afford excellent harbors, and there is also a good port on the south side of Utila. The references had elsewhere to these islands preclude the necessity of any special reference to their ports. It is only necessary to say that these islands are surrounded by coral reefs and cays, which render approach to them difficult except under the direction of experienced pilots.

Amapala is a free port, situated on the island of

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Tigre, in the Gulf of Fonseca, and is the principal, and, in fact, the only port of Honduras on the Pacific. The nominal port of La Paz, on the main land, is a simple office for the collection of duties on goods which may be introduced for sale. A sufficient account of this port is given in the paragraphs on the Bay of Fonseca, and in the description of the island of Tigre, in a subsequent chapter.

CHAPTER VII.

ISLANDS OF HONDURAS.

TO the northward of the main land of Honduras, in the bay of the same name, there is a cluster of islands lying nearly parallel to the coast, at a distance from it of from thirty to fifty miles. Their names, in the order of their size, are Roatan (sometimes written Ruatan and Rattan), Guanaja (or Bonacca), Utila, Barbaretta, Helena, and Morat. Dependent upon them are numerous coral islets or "cays" of small size. These islands have good soil, fine climate, advantageous position, and some of them excellent harbors, rendering them both valuable and important to that portion of the continent upon which they are geographically dependent.

Roatan, the largest of these islands, is about thirty miles long by nine broad at its widest part. "It may be considered," says Alcedo, "as the key of the Bay of Honduras, and the focus of the trade of the neighboring countries." "This beautiful island," echoes Macgregor, "has an excellent harbor, easily defended, and is well adapted to the culture of cotton, coffee, and other tropical products." And Captain Mitchell, of the British Navy, whose account was written in 1850, adds, that "the local position of the island seems one of importance in a commercial, and perhaps in a political, point of view. It is the only place where good harbors are found on an extensive and dangerous coast." And also "that its proximity to Central

America and Spanish Honduras seems to point it out as a good dépôt for English goods and manufactures, where they would find a ready market, *even in opposition to any duties placed on them.*" "Roatan and Bonacca," writes another English author, "in consequence of their fine harbors, good soil, pure air, and great quantities of animals, fish, and fruits, and commanding ground, are proverbially known in that part of the world as the 'Garden of the West Indies,' 'the Key to Spanish America,' and a 'New Gibraltar.' From their natural strength they might be made impregnable, being tenable with a very small force."*

Strangeways affirms that here are found "great quantities of cocoanuts, wild figs, and excellent grapes. The forests produce white oaks and pine-trees fit for masts of merchant ships. It abounds with deer, wild hogs, Indian rabbits, and birds of many species. A constant breeze from the east cools and tempers the air, and there is abundance of excellent water." Young describes the island "as one beautiful mass of ever-greens, from the shore to the tops of the high hills, interspersed with many cocoanut gardens; and there are many patches of coffee, which, although abandoned, continue to thrive well."

The account of this island by Captain Mitchell, R. N., is the latest and fullest. He says that it has little waste land on it, and that the whole might be advantageously cultivated.

"Limestone is the principal formation: there are also sandstone and quartz, and a great deal of coral on the lower parts. The island seems originally to have been elevated by a volcanic eruption, and the lower portions washed up by the subsequent action of the sea. On the coral formations sand has been thrown

* *Memoir on the Mosquito Territory*, by Captain John Wright, p. 16.

up; then decayed vegetable matter and seeds, drifted or brought by birds from the continent and surrounding lands. These, springing up and decaying, have assisted in forming a fruitful soil, on which man has at length landed, erected his dwelling, and has found the land subservient to his wants. These remarks are applicable to the lower portions of the island. I have not heard of any minerals having been collected on the island.

“The island has a singularly beautiful appearance at a distance, as you approach it in a ship. The mountains rise in a gradual height to the summit of nine hundred feet, and they seem successively to follow each other, intersected by valleys, the whole thickly and most luxuriantly wooded. As you draw near to it, you discover that palm and cocoanut-trees encircle the shores, and forest trees of various descriptions grow on the higher hills. The natural beauty of its appearance is greatly enhanced when you cast anchor in one of its many harbors on the southern side.

“In the valleys, alluvial deposits and decayed vegetable matter form the soil, which is exceedingly rich and deep. On the mountains and their declivities, a red clay or marl predominates.

“A great deal of good and useful timber is found spontaneously growing on the island, such as Santa Maria wood, extensively used for ship-building, three varieties of oak, cedar, Spanish elm, and lancewood, and the shores of the island are lined and surrounded with groves of cocoanut-trees; a tree which, in administering to the wants of man, is hardly surpassed in tropical regions. The seeds of this tree in remote times have been probably drifted here, and they have sprung up in abundance on a sandy and low shore, which is found so congenial to their growth.

“At present, the island produces in abundance cocoanuts, plantains, yams, bananas, pine-apples, etc., etc.; but I feel convinced that bread-fruit, European vegetables, and, indeed, many fruits, vegetables, and productions of more temperate regions, would grow here.

“The country is capable of raising all tropical productions, such as sugar, coffee, tobacco, etc., which might become staple commodities of export.

“There was found on the island previous to its being inhabited a great quantity of deer, wild hogs, Indian rabbits, parrots, pigeons, birds of various descriptions, etc. Some years ago, previous to its settlement, men from small vessels and fishing-boats, employed on the surrounding coasts, originally resorted to this island for the purpose of supplying themselves with game and stock.

“A great quantity of domestic animals, such as poultry, pigs, etc., are raised; cattle might be raised, but the inhabitants have not yet the means of keeping them from destroying their plantations.

“It seems probable the island at some remote period was thickly inhabited by the Indian race. In clearing away the land for plantations, many domestic and culinary utensils have been found. There is a tradition that the Spaniards (in accordance with their system of cruelty), on their first discovery of America, depopulated the island; they seized upon the aborigines, and took them to the continent to work in the mines, whence they never returned.

“A great deal of rain falls in the winter months from September to February. This has the effect of cooling the air beyond what is felt in the other parts of the West Indies, and the breeze tempers the influence of the sun. If the people could keep themselves dry and free from damp, the climate must not only be exceedingly agreeable, but singularly pure and healthy. The dry months are much warmer; the natives, however, do not complain of the heat; they aver that it is the healthier portion of the year. The thermometer since we have been here (January) has averaged 80° of Fahrenheit.

“Rheumatism is very common, and a species of low fever or ague; the latter probably arises from the land not being sufficiently cleared away, and a luxuriant and decaying vegetation; the former from constant damp and exposure. Yet I should think, from my limited observation, that the climate is not only healthy to those born in warm latitudes, but that Europeans, with proper precautions, might enjoy not only health, but live to a good old age.

“The population of the island is now estimated at 1600 or

1700. In 1843 it was only eighty. It has gone on steadily and rapidly increasing, and there are at present three births to one death. With the means of existence at hand, and almost prepared for them, the young people have a disposition to marry at an early age; their families are large, many consisting of nine to ten, and even more children. They seem to be a proof of what has been often asserted in civilized countries, that a diet of vegetables and fish, or what is usually termed scanty food, is favorable to population.

“The population is scattered in different parts along the whole sea-shore of the island; from obvious reasons, they find these localities more convenient than the interior. They here erect their dwellings, in the midst of their palm and plantain groves, having their little vessels and fishing-boats in quiet and sheltered nooks, and convey their produce and seek for their wants by water-carriage.

“At Coxen Hole, or Port M'Donald, the greatest numbers seem located: there are here perhaps five hundred. It is a safe and sheltered harbor; yet chance seems to have directed them, in the first instance, to this spot, as I am inclined to believe, from my limited observation, there are other places more eligible for a township.

“The mass of the population is composed of liberated slaves from the Grand Cayman, and a small portion of the inhabitants are colored people, also natives of that island, and formerly slave-owners. These latter people seem to be the most wretched on the island; unaccustomed to labor, and having lost their property and their slaves, or squandered away what they obtained for them, they have no longer any means of existence. From a false feeling of pride, so universal in man, and found alike in all countries, they were unwilling to labor in a small island where they were once regarded with comparative consequence, and they emigrated and sought their fortunes on the unpeopled shores of Roatan. The slaves who had obtained their freedom, but could not procure labor in a small island like the Grand Cayman, hearing of the success of their former masters, followed in their footsteps.

“The dark population, or those who were formerly slaves,

from their physical powers and their habits of labor from childhood, soon surpassed the white population in the accumulation of the means of existence, and are now the most thriving and successful.

“If riches be estimated from man’s wants being easily supplied, and the accumulation of more than he requires, these people are not only wealthy, but in far better circumstances than many of those who are relieved from manual labor in Europe.

“Added to these two classes, a third, and much smaller one, must be named, which consists purely of Europeans. They are men who have tried various pursuits and professions of life, which they have given up for various reasons, have taken to others, and have become familiar with the hard usages of adversity ; and they sought this remote island, some in their old and some in their middle age, either to commence again, or to retrieve their broken fortunes, or to speculate in an imaginary construction of wealth. This class, though small in numbers, exercise a great influence over the minds of the community.

“The mass of the population is a fine race. They are strong, active, and athletic, temperate, quiet, and regular in their habits, not given to excess. The sexes are equally divided, and the old, who have lived with women in the days of slavery, evince a disposition to be married. I should say they have fewer vices than one usually meets among their class. As a proof that their character is good, they have lived and are living without any form of government or restraint, and the crimes that have been committed are comparatively few.

“Their occupation consists in cultivating their grounds and plantations, fishing, turtling, etc. Necessity, in all countries and in the first rude ages of civilization, has been fertile in invention, consequently it is by no means extraordinary to find the mass of these people familiar with those rude mechanical arts of which they stand so much in need. Every man erects his own dwelling, plants and lays out his ground—most are carpenters, some good rope-makers. They have a knowledge of boat and ship building, the making of lime, etc., and other useful attainments. Their dwellings are well and comfortably made.

“Their trade or commerce is in their plantains, cocoanuts, pine-apples, etc., and this trade is steadily increasing. With these articles they trade to New Orleans, bringing back lumber, dry and salt provisions, etc.

“Their relations with other countries consist principally with New Orleans, Belize, and Spanish Honduras.

“I should conceive the island might maintain a population of 15,000 or 20,000 when cultivated.

“The harbors on the south side of this island are many and good. I have visited Coxen Hole, or Port M'Donald, and Dixon's Cove. In both of these you are sheltered from all winds. They have great facilities for heaving down and repairing ships, and fresh water is found in abundance.

“Dixon's Cove is a good harbor. It is about six miles to the eastward of Port M'Donald, in some points preferable to the latter. A ship having lost her anchors might run into this harbor and ground upon the soft mud without injury. Many ships might find anchorage here.

“There is, again, Port Royal, a much larger harbor, and where twenty or thirty sail of the line might be moored. Its entrance is exceedingly narrow, which is its drawback, and the land is said not to be so fertile. Generally speaking, these harbors are surrounded by reefs of coral; their channels are narrow, and ought never to be attempted by strangers; but a local knowledge is easily obtained. The channels between the reefs are deep, and show themselves by the blueness of the water.”*

Twenty-two vessels left Roatan in the year 1854, with fruits and vegetables for New Orleans.

Guanaja or Bonacca was discovered by Columbus, then sailing on his fourth voyage, in 1502. It was surveyed in 1840 by Lieutenant Thomas N. Smith, R. N., and, according to the chart published under order of the British Admiralty, is nine miles in length by five in breadth. It is distant about fifty miles

* *Statistical Account and Description of the Island of Roatan*, by Com. R. C. Mitchell, R. N., *United Service Magazine*, August, 1850.

from the nearest point on the main land, and about fifteen miles to the northeast of Roatan, with which it is connected by a series of reefs, through which there are only a few narrow passages. The land is high, and can be seen from a great distance at sea. Henderson touched its shores during his voyage, anchoring in "a little bay of great depth of water, which, however, was so transparent that the shell-fish and coral rocks at the bottom could be clearly discerned. This part of the island," he continues, "is highly romantic and picturesque, and, like Roatan, profusely covered with trees. Its natural productions appear to be the same."* Roberts also visited it, "landing opposite a watering-place, in an excellent harbor on the south side. The beach, above high-water mark, was thickly covered with cocoanut trees, and innumerable tracks of the wild hog were visible on the ground. The island contains hills of considerable elevation, thickly covered with trees, and is said also to have beds of limestone and ores of zinc."†

The account of Young, who was forced to take shelter there through stress of weather, is fuller, and gives a picture of the island as it was in 1841.

"It is covered with high hills, producing much valuable timber, and in the rich valleys and fertile savannas are numerous fruit-trees of various kinds. Along the water's edge, in many parts of the island, are numbers of cocoanut-trees. One spot, in particular, in the middle of the island, is called the cocoanut garden, where there are many other fruit-trees, indicating the hand of industry. Viewed from any part, the island has a pleasing appearance, and, though small, might be made of importance if the English were to establish themselves upon it. The woods abound in wild hogs of large size, and thousands of Indian rab-

* Henderson's Honduras, p. 194.

† Roberts's Narrative, p. 276.

bits ; the trees are full of pigeons and parrots ; and the lagoons and harbors are celebrated for an immense variety of fish, which may easily be caught by going toward the edges of the coral reefs in a *dory* (canoe), where the bottom is plainly visible. Here the splendid sea-fans expand themselves, and almost invite the beholder to grasp them, so seducing are they in appearance, and so deceptive is the depth of the water. In some places large clusters of sponge can be seen ; in others, handsome sea-eggs, inviting but to betray ; and, altogether, with the numerous cays, studded with graceful cocoanut-trees around, there can not be imagined a scene more novel and beautiful. Under the rocks, on the reefs round the cays, are plenty of craw-fish ; conchs and wilks are found in all parts, and a species of iguana, called *ilishle*, abounds in every cay. The climate is exceedingly good, and during the ravages of the cholera at Truxillo a few years ago, the commandant of that place sent many to this island for the recovery of their health. Of the whole number, but three died. When Black River was occupied by the British, before the evacuation took place in 1778 by order of the British government, in consequence of its agreement with Spain, those of the colonists who were seized with the intermittent fever were sent to Guanaja, whence they generally returned improved in health and strength. It is surprising, considering the salubrity of this island, the richness of its soil, its woods, and fisheries, and its adaptation to many purposes, that it has never been settled by the English. By many traces, it is clear that it was formerly populated by the Indians.

“ In one part of the island, near Savanna Bight Cay, there is a very rich and fine savanna, with several fruit-trees in it ; and, what is more singular, near the place a stone wall has been discovered, evidently, by its shape and appearance, the work of uncivilized man. This wall runs along for some distance a few feet high, and here and there are fissures, or rude niches, made for the admission of peculiarly-cut three-legged stone chairs, which, I suppose, must have been seats for their idols. Several places have been discovered cut out of the solid rock representing chairs, and numerous articles of roughly-burned clay, in various fantastical devices, for holding liquids, have been

found, as also broken English crockery and iron; and I have seen several curious things in the possession of various people, which have been dug up, and are doubtless of Indian manufacture. I understand the adjacent island, Roatan, exhibits yet more proofs of having been inhabited by an uncivilized race.

“In the months of April and May, thousands of birds, called boobies and noddies, generally lay their eggs on the southwest part of Half-moon Cay, thus affording a most delicious provision for nearly two months.

“The number of cocoanut-trees is really incredible, so much so that great advantage might be derived from making oil, which might be effected at a small expense, especially as living, after the first twelve months, would cost little or nothing but labor, allowing that time for the establishment of plantations on the main land for any sort of bread kind, as the soil is so well adapted for such a purpose. Plantains, which may be considered as the standard, thrive wonderfully; this, with keeping some hogs and fowls on a cay, and feeding them on the refuse of the cocoanut, etc., would, in a short period, show the advantage to be reaped. A few good Spanish dogs for hunting the wild hog, two or three turtle-nets, harpoons, hooks and lines, and fish-pots, are indispensable. On the island may also be grown coffee, cotton, tobacco, cacao, etc. During the greater part of the year plenty of fish and wild hogs can be caught, but when bad weather sets in, which is sometimes the case, little good can be done.

“With respect to making oil, it takes about fourteen common sized nuts to make a quart, by the method in vogue at Roatan, etc.; but by the introduction of the hydraulic press, I should say, a quart might be expressed from nine or ten, and with a great saving of labor.

“The many uses to which the cocoanut-tree and its fruit can be applied are pretty well known; suffice it to say, it may be considered as one of the most valuable productions which a bountiful Providence has lavished on tropical climates. At the present time the island abounds with wild hogs, they not having been hunted much lately. Caribs occasionally resort to Guanaja for the purpose of hunting these animals, but they have not been so frequently as in former years, thus the hogs have

much increased. The only things that can be said to militate against the island and its cays are, firstly, the myriads of bottle and horse-flies on the former, and mosquitoes and sand-flies on the latter, which appear to deter people from settling; although it is evident that, when a place is covered with vegetation, these annoying insects must exist, and that, as the land becomes cleared, the flies will gradually diminish.

“From March to June the cays are subject to the pest of whole armies of soldier-snails, creeping and crawling over every thing the moment the sun sets, and with such an indescribable noise as to surpass belief; the dead branches on the ground creak and break under the legion as they advance, consuming all in their progress. They were a great nuisance to us, as we were obliged to hang up our hammocks pretty high.

“On the whole, Guanaja may be considered a fine island, and one on which any man could soon obtain the necessaries of life, and with energy, activity, and a strict determination to sobriety, even the luxuries, without fear of a bastille in his old age.

Helena, *Morat*, and *Barbarett*a, are comparatively small islands, and may be regarded as detached parts of Roatan. They are, in fact, connected with it by reefs, through which there are only a few narrow and intricate passages. Captain Henderson, who visited Barbaretta in 1804, has left us a very animated and quite an enthusiastic account of its beauty. He describes it as high, and covered with a dense forest.

“After a walk of a mile and a half along the beach, in a course contrary to that which I had pursued the day before, we came to the rocks, and here, although our progress seemed less difficult to the eye, it scarcely presented fewer obstacles to the feet. Difficulties, however, sink before determination. After some trouble, I gained a firm station on a tolerable eminence, and without resorting to the extravagant and affected language sometimes used on similar occasions, I might truly say the whole was enchantingly beautiful and picturesque. The spot on which I stood might be connected with a space of somewhat more than

half an acre, entirely clear of trees, and covered with luxuriant grass. Beyond this the whole became a thick, continued grove,

‘Where scarce a speck of day
Falls on the lengthened gloom.’

At the base of the rock the sea rolled with loud and haughty sway, and the confused masses of stone which lay scattered about at once confessed its uncontrollable dominion.”*

It was subsequently visited in 1841 by Young, who found some Spaniards from the main land established there. One of these, Señor Ruiz, showed him over his “large and extensive plantations, full of all manner of bread kind, besides greens, peas, and beans of various descriptions. He had a large expanse of ground covered with cotton-plants, and hundreds of papaya-trees, the fruit of which he gave to his fowls and hogs. He had also a cane-patch, and a small mill for crushing it, as he made his own sugar. There was a large turtle-crawl opposite his dwelling containing eight turtles. In rainy weather, he employed his people in the manufacture of cocoanut oil.” Finding him surrounded with all these means of comfortable and even luxurious existence, Young was astonished to learn that he had arrived there only three years previously, “with his wife, his son, about eleven years of age, some provisions, a gun, two or three machetes (large knives), and a few hooks, and other trifles.” “I thought,” continues this author, “of the thousands of my poor countrymen struggling in vain for a decent subsistence, and who would live in independence if similarly situated, instead of being brought to an early grave by disappointed hopes, or the weight of a large family.”† Roberts, who also visited Barbaretta, speaks of finding “three or four sorts of wild grapes.”

* Henderson's Honduras, p. 194.

† Young's Narrative, p. 151.

Helena is smaller than Barbaretta, distant from it between four and five miles, near the extreme north-eastern extremity of Roatan. Young found there a Frenchman, in the Honduras service, who had "plantations and large nets for turtling." His principal business, however, was that of making lime, which he sold at Omoa and other places at from two to three dollars a barrel: "rather a high price, but which he obtained in consequence of its strength, the kind of stone from which it is made being found chiefly in this island."

Honduras has two large islands in the Gulf of Fonseca, on the Pacific, viz., Tigre and Sacate Grande, which are described in the account elsewhere given of that gulf.

CHAPTER VIII.

POLITICAL DIVISIONS—DEPARTMENTS OF COMAYAGUA, GRACIAS, CHOLUTeca, TEGUCIGALPA, OLANCHO, YORO, AND STA. BARBARA.

THE political divisions of Honduras are seven, viz.: the Departments of Gracias, Comayagua, Choluteca, Tegucigalpa, Olancho, Yoro, and Sta. Barbara. The subjoined table expresses the capital, area, and population of each, as also the aggregate area and population of the state:

HONDURAS—CAPITAL, COMAYAGUA.

Departments.	Capitals.	Area in Square Miles.	Population.	Inhabitants to Square Mile.
Comayagua .	Comayagua .	4,800	65,000	13½
Tegucigalpa .	Tegucigalpa .	1,500	65,000	43
Choluteca . .	Nacaome . . .	2,000	50,000	25
Sta. Barbara.	Sta. Barbara .	3,250	45,000	12½
Gracias. . . .	Gracias	4,050	55,000	13½
Yoro	Yoro	15,100	20,000*	1⅓
Olancho . . .	Jutecalpa . . .	11,300	50,000*	4
Total		42,600	350,000	8½

Each department has a distinct representation in the general Congress of the state, and is governed by an officer appointed by the central government, who bears the title of *Jefe Politico*, or political chief. Each department is also subdivided into districts, for the convenience of the inhabitants and the better administration of justice.

* The population in Yoro and Olancho is calculated exclusive of the Indian tribes; and the area of the unsettled country, comprising nearly the whole of the eastern and politically unorganized half of the state, is divided between these two departments.

DEPARTMENT OF COMAYAGUA.

Districts.—Comayagua, Lajamini, Yucusapa, Siguatepeque, Miambar, Aguanqueterique, Goascoran.

Principal Towns.—Las Piedras, or Villa de la Paz, Villa de San Antonio, Opoteca, Espino, San Antonio del Norte, Goascoran, and Caridad.

The Department of Comayagua, lying in the very centre of Honduras, and comprehending its capital, the ancient city of Comayagua, is entitled to the first place in a notice of the various departmental divisions of the state. Its distinguishing geographical feature is the plain of the same name, to which I have elsewhere adverted, and in which a great part of the population of the department is concentrated. The capital itself, the considerable towns of Las Piedras and San Antonio, and the smaller towns of Ajuterique, Lajamini, Yarumela, Cane, Tambla, Lamani, and Lo de Flores, are all found in this plain, embracing a population of not far from 25,000 souls.

The city of Comayagua (anciently called Valladolid) is situated on the southern border of the plain. It was founded in 1540 by Alonzo Caceres, in obedience to instructions “*to find out an eligible situation for a town midway between the oceans.*”

It now contains between 7000 and 8000 inhabitants. Previous to 1827 it had about 18,000, and was embellished with fountains and monuments. In that year it was taken and burned by the monarchical faction of Guatemala, and has never been able wholly to recover from the shock.

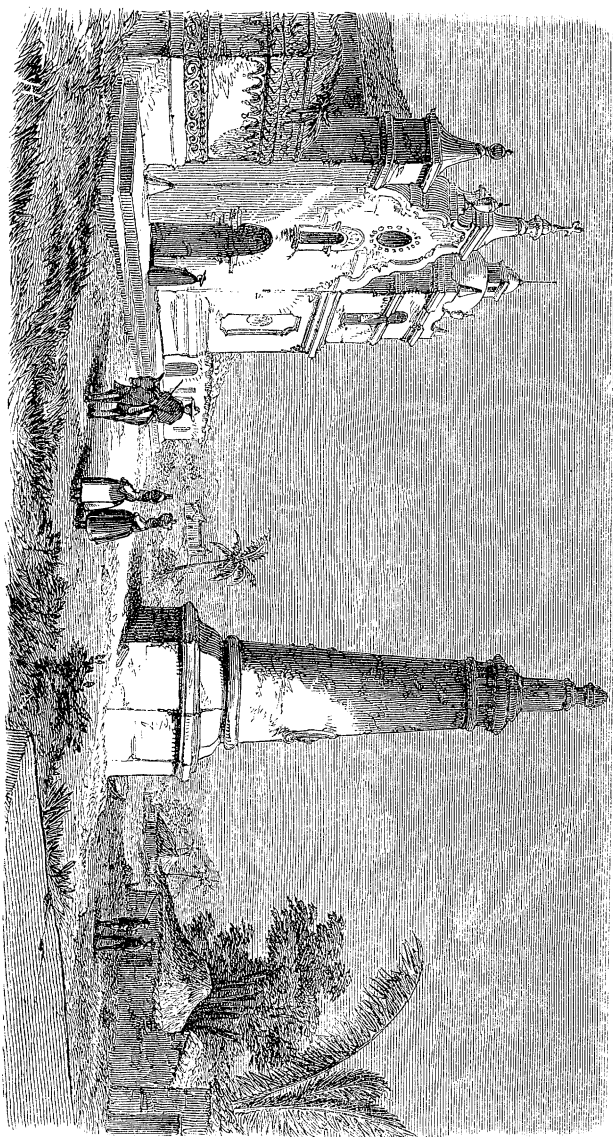
In the maps its position has been put too far to the eastward and southward. It is in lat. $14^{\circ} 28' N.$, and long. $87^{\circ} 39' W.$, and in a right line, or within a few miles of a right line, drawn between the mouth of the

Ulúa and that of the Goascoran. Its distance from the Bay of Fonseca is seventy miles, and it is, within a few miles more or less, midway between the two seas.

Comayagua is the seat of a bishopric, and has a large, and, according to Spanish taste, an elegant Cathedral. It has also a University, founded many years ago, but which declined in consequence of the adverse political circumstances of the country, until it was revived in 1849, under the auspices of Dr. Don Juan Lindo, a man of enlightened spirit, then president of the state. The trade of the city is small. Hitherto the difficulty of communication with the coast has prevented it from gaining any commercial eminence. But when the incentives and means for developing the resources of the adjacent country shall be afforded, it must become a place of much importance.

The plain, upon its eastern and western borders, is skirted by mountains five or six thousand feet high, and it consequently enjoys a climate cool, equal, and salubrious, comparing in respect of temperature with the Middle States of our Union in the month of June. The hills and mountains adjacent to the plain are covered with pines, and on their summit and slopes, wheat, potatoes, and other products of the temperate zones are cultivated, and may be produced in abundance. The productions of the plain, however, are essentially tropical. Its soil is extremely fertile. In short, the plain of Comayagua offers all the conditions for attracting and sustaining, as there is abundant evidence that it formerly sustained, a large and flourishing population.

Indeed, hardly a step can be taken in any direction without encountering evidences of aboriginal occupation, and the names of the principal towns in the valley



CHURCH OF MIERCE, AND INDEPENDENCE MONUMENT, COMAYAGUA.

are only perpetuations of those which they possessed before the conquest. In some of them the predominating portion of the population is still unmixed Indian. Lamani, Tambla, Yarumela, Ajuterique, Lajamini, and Cururu, are all Indian names. There are also many Indian towns which have been entirely abandoned as the population of the country has decreased, and of which the traces are now scarcely visible.

The principal ruins, strictly aboriginal and of ancient architecture, are in the vicinity of Yarumela, Lajamini, and near the ruined town of Cururu. They consist of large pyramidal, terraced structures, often faced with stones, conical mounds of earth, and walls of stone. In these, and in their vicinity, are found carvings in stone, and painted vases of great beauty.

The principal monuments, however, retaining distinctly their primitive forms, can hardly be said to be in the plain of Comayagua. They are found in the lateral valleys, or on the adjacent tables ("mesas") of the mountains. Of this description are the ruins of Calamulla, on the road to the Indian mountain town of Guajiquero; of Jamalteca, in the little valley of the same name; of Maniani, in the valley of Espino; of Guasistagua, near the little village of the same name; of Chapuluca, in the neighborhood of Opoteca; and of Chapulistagua, in a large valley back of the mountains of Comayagua. I have visited all of these, but in many respects the most interesting, and by far the most extensive, are those of Tenampua.

The ruins of Tenampua are popularly called Pueblo Viejo, Old Town. They are situated on the level summit of a high hill, almost deserving the name of mountain, about twenty miles to the southeast of Comayagua, near the insignificant village of Lo de Flores, by

the side of the road leading to the city of Tegucigalpa. The summit of the hill is a plain or savanna, covered with scattered pines, and elevated about sixteen hundred feet above the plain of Comayagua, of which, in every part, a magnificent view is commanded. The hill is composed of the prevailing soft, white, stratified sandstone of this region, and its sides, except at three points, are either absolutely precipitous, or so steep as to be nearly if not quite inaccessible. At the accessible point, where narrow ridges connect the hill with the other hills of the group, are heavy artificial walls of rough stones, varying in height from six to fifteen feet, and in width, at the base, from ten to twenty-five feet. These walls are terraced on the inner side, for convenience of defense. At various points there are traces of towers, or buildings designed perhaps for the use of guards or sentinels. The dimensions of the wall correspond to the greater or less abruptness of the slope along which it is carried, and are greatest where the ascent or approach is easiest. Where narrow gullies or natural passes existed, the hollows have been filled with stones, so as to present a vertical outer face, corresponding with the rocky escarpment of the hill. Naturally, I think this place is the strongest position I have ever seen. That it was selected, in part at least, for defense is obvious. Under any system of warfare practiced by the aborigines, it must have been impregnable. The defensive design is made still more apparent by the existence, in the centre of the area of the summit, at a place naturally low and marshy, of two large square excavations, now partially filled up, which were clearly designed for reservoirs.

But the most interesting features of Tenampua are not its ruined walls and defenses. The level summit

of the hill is about one and a half miles long, by half a mile in average width. The eastern half of this large area is crowded with ruins. They consist chiefly of terraced mounds of stone, or of earth faced with stone, of regular rectangular forms, their sides conforming to the cardinal points. Although the stones are uncut, they are laid with great precision. Most of the small mounds, which occur in groups, and are arranged with obvious design in respect to each other, are from twenty to thirty feet square, and from four to eight feet in height. There are none of less than two, but most have three or four stages. Besides these, there are a considerable number of large pyramidal structures, varying from sixty to one hundred and twenty feet in length, of proportional width, and of different heights. These are also terraced, and generally have ruins of steps on their western sides. There are also several rectangular inclosures of stone, and a number of platforms and terraced slopes.

The principal inclosure is situated in the very midst of the ruins, at a point conspicuous from every portion of the hill. It is three hundred feet long by one hundred and eighty feet broad. The wall is fourteen feet broad, but now elevated only a few feet above the ground. It seems to have consisted of an outer and inner wall, each about two feet thick, between which earth had been filled to the depth of two feet. Transverse walls then appear to have been built at regular intervals, dividing it into rectangular areas, resembling the foundations of houses. It is not improbable they were surmounted by structures of wood, devoted to the use of the priests or guardians of the great temple, in the same manner that, according to the chroniclers, "the cloisters of the priests and attendants" surround-

ed the court of the great temple of Mexico. The line of the wall is only interrupted by the gateway or entrance, which is on the western side, between two oblong terraced mounds, in which the ends of the wall terminate. To preserve the symmetry of the inclosure, the opposite or eastern wall has in its centre a large mound, also terraced and regular in form, equaling in size both those at the entrance.

Within the inclosures are two large mounds, the relative positions and sizes of which can only be explained by a plan. The largest has three stages and a flight of steps on its western side. From its southwest angle a line of large stones, sunk in the ground, is carried to the southern wall. The north line of this mound coincides with one drawn from east to west through the centre of the inclosure. Between it and the gateway is a square of stones, sunk in the ground, which may mark the site of some edifice. The second pyramid is situated in the northeast corner of the inclosure; it has the same number of stages with the larger one just described, and, like that, has a flight of steps on its western side.

At the extreme southeast corner of the hill is another inclosure similar to this, except that it is square, and has openings in the centre of each side. It also contains two terraced mounds, ascended by steps. Between the great inclosure, or central structure, and the precipice which faces the hill on the south, is a depression or small valley. This is terraced upon both sides, the terraces being faced with stone, ascended by various flights of stone steps. The principal mound beyond this depression is situated upon the edge of the precipice, due south of the great mound in the principal inclosure. It commands a view of the entire south-

ern half of the plain of Comayagua, and fires lighted upon it would be visible to all the inhabitants below. I could not resist the conviction that its position had been determined by this circumstance.

There are many other striking features in these ruins, of which no adequate idea can be conveyed except from plans, and which, therefore, I shall not attempt to describe. The most singular, perhaps, consists of two long parallel mounds, each one hundred and forty feet in length, thirty-six feet broad at the base, and ten feet high in the centre. The inner sides of each, facing each other, appear to have consisted of three terraces, rising like the seats of an amphitheatre. The lower terraces are forty feet apart, and faced with huge flat stones, set upright in the ground, so as to present an even front. The outer sides of these mounds have an appearance corresponding with that of the walls of the great inclosure, and each seems to have been the site of three large buildings. The whole rests on a terrace three hundred and sixty feet long. Exactly in a line with the centre of the space between these parallels, and distant twenty-four paces, are two large stones placed side by side, with an opening of about one foot between them. Fronting these to the northward, and distant one hundred and twenty paces, is a large mound occupying a corresponding relative position in respect to the parallels, and having a flight of steps on its southern side. Upon these mounds, as indeed upon many of the others, are standing large pine-trees, upward of two feet in diameter. Without attempting to define the special purposes of these parallels, it seems to me probable that they had a corresponding design with the parallel walls found by Mr. Stephens at Chichen-Itza and Uxmal in Yucatan. Doubtless games, proces-

sions, or other civic or religious rites or ceremonies, took place between them, in the presence of priests or dignitaries who were seated upon the terraces on either hand.

The form of the various mounds at Tenampua precludes the idea that they were used as the foundations of dwellings. It seems quite clear that they were either altars or sites of temples—counterparts of those of Guatemala, Yucatan, and Mexico, and of a large portion of those found in the Mississippi Valley, with all of which they accurately coincide in the principles of their construction. I was able to excavate but one, situated in the vicinity of the great temple. The mass of the mound, after penetrating the stone facing, was found to be simple earth; but the interior of the upper terrace was composed almost entirely of burned matter, ashes, and fragments of pottery. Great quantities of these fragments were discovered, and I was able to recover enough of some vessels to make out their shape, and the paintings and ornaments upon them. Some were flat, like pans; others had been vases of various forms. All were elaborately painted with simple ornaments or mythological figures. One small, gourd-shaped vase, of rude workmanship, I recovered nearly entire. It was filled with a dark-colored, indurated matter, which it was impossible to remove. Fragments of obsidian knives were also found.

Near the western extremity of the summit of the hill are two deep holes with perpendicular sides, sunk into the rock. They are about twenty feet square and twelve feet deep. Although now partially filled with earth, a passage is to be discovered at the bottom of each, leading off to the north. These passages seem to have been about three feet high by nearly the same width.

How far they may go, or whither they lead, is unknown. The water which flows into them during rains finds a ready outlet. I am unprepared to decide whether these openings are natural or artificial, but incline to the opinion that they are natural, with perhaps artificial improvements or adaptations. A ruined pyramid stands near the principal mouth. The tradition concerning them is that they were dug by the "antiguos," and lead to the ruins of Chapulistagua, beyond the mountains, and were designed to afford an easy means of flight in case of danger.

Altogether there are here the remains of between three and four hundred terraced, truncated pyramids of various sizes, besides the other singular inclosures which I have mentioned.

The whole place probably served both for religious and defensive purposes. This union of purposes was far from uncommon among the semi-civilized families of this continent. I have presented, in my work on the Monuments of the Mississippi Valley, many instances in which structures strictly religious are found within works clearly defensive. It was within the area, and on the steps and terraces of the great temple of Mexico, that the Aztecs made their final and most determined stand against the arms of Cortez. It is not to be supposed, however, that this was a fortified town, or a place permanently occupied by any considerable population. The summit of the hill is rocky, and the soil thin and poor, affording few of the usual accessories of a large Indian population, viz., abundant water and rich lands. The builders doubtless had their permanent residences in the plain below, and only came here to perform religious or sepulchral rites, or to find safety in times of danger.

Falling within the Department of Comayagua is the plain of Espino. It lies to the northward of the plain of Comayagua, from which it is separated by only a narrow range of hills, and of which it may be regarded as an extension or dependency. It is watered by the same river, the Humuya, which traverses its entire length. The plain of Espino is sometimes called Maniani. It is much smaller than that of Comayagua, being but about twelve miles long by eight broad, but in other respects, such as climate, productions, etc., what is true of one is equally true of the other.

Dependent also upon the plain of Espino is the small lateral valley of Jamalteca, a spot of surpassing beauty, abounding in springs of water, which sustain its vegetation fresh and vigorous, and enable the inhabitants to keep an uninterrupted succession of crops during the dryest seasons, when the country elsewhere is parched, and agriculture is suspended. In this valley are some very interesting monuments of the aborigines, indicating a large ancient population.

Nearly the whole length of the valley of the Rio Goascoran, which flows southward from the plain of Comayagua into the Gulf of Fonseca, falls within this department. This valley is narrow, and, except at its mouth, where it expands into the Pacific plains, does not embrace much valuable land. It is chiefly interesting as offering an easy route for the projected line of railway.

The mountains of San Juan or Guajiquero, in the southeast portion of this department, are occupied exclusively by Indians descended from the aboriginal Lencas. These mountains of stratified white sandstone are naturally terraced, presenting to the eye bold escarpments of rock, but supporting beautiful level areas, covered with rich soil, on which the Indians cul-

tivate wheat and other grains, and the fruits of higher latitudes. They also rear a fine and very hardy race of mules, and altogether evince a degree of perseverance and industry, very wide nevertheless of enterprise, which we look for in vain among the semi-European inhabitants.

Every department in Honduras possesses more or less mineral wealth. In this respect, although not ranking so high as some of the others, the Department of Comayagua is abundantly favored. The considerable town of Opoteca is literally built upon a silver mine, which was most extensively worked under the crown, and with signal success. At present the attention of the inhabitants, for obvious reasons, is directed to agriculture. Near Aramacina, Las Piedras, and in the mountains near Lauterique, are numerous mines of silver, now wholly abandoned or imperfectly worked. They only need the touch of intelligence, enterprise, and capital to become of value. Copper ores exist in abundance, but no attempt has ever been made to reduce them. Throughout the entire department there are vast beds of blue and veined marble, proper for every class of constructions and for conversion into lime. The predominating rock is sandstone, generally milky white, but sometimes of cream color verging on orange. Near Guajiquero are also found inexhaustible beds of variously-colored ochres, of fine quality. These were and still are used for painting by the aborigines. The colors are remarkably vivid.

Pine and oak are abundant on the hills throughout this department, and mahogany, cedar, and *lignum-vitæ*, as well as other useful woods, are found in all desirable quantities in the valleys bordering the streams. Many varieties of cactus are found in the plain of Co-

mayagua. The most common is the variety called the *nopal* in Mexico, and which is cultivated in the southern states of that country, and in Guatemala, for the production of cochineal. The numerous wild plants of this variety found in Honduras produce what is called *grana silvestre*, or wild cochineal. The plains of Comayagua and Espino are admirably adapted, therefore, for the cultivation of cochineal, as well as coffee, and all the other great staples of semi-tropical regions.

DEPARTMENT OF GRACIAS.

Districts.—Ocotepeque, Guarita, Erandique or Corquin, Gualalcha, Sensenti, Camarca, Intibucat, Gracias, Sta. Rosa, and Trinidad.

Principal Towns.—Gracias, Sta. Rosa, Intibucat, Sensenti, Corquin, San José, Ocotepeque, Cololaca.

The Department of Gracias lies in the northeastern angle of the state, touching upon Guatemala and San Salvador. Its territory is, in many respects, the most interesting in all Central America, of which it may be regarded as, in some degree, an epitome. In respect to it we have more information than in regard to any of the others. This is due to Señor Don José M. Cacho, present Secretary of State of Honduras, who, as Commissioner of the Census of 1834 for this department, discharged his duties, considering all the difficulties of the case, in a very creditable manner.

Its surface is much diversified, and it is distinguished by several groups of majestic mountains. The Mountains of Selaque occupy very nearly the centre of the department; and on the north it has the range of Merendon, which, as I have elsewhere said, extends from the borders of San Salvador to the Bay of Honduras, a distance of not far from one hundred and fifty

miles. It is called by different names at different points, as Merendon, Gallinero, Grita, Espiritu Santo, and Omoa. No towns occur in these mountains, except the small village of Dolores Merendon. At its feet, upon the north, are several beautiful valleys, among which is that of Copan, distinguished for its ancient monuments. Upon the south, nearly coinciding with the boundaries between this department and that of Comayagua, are the Mountains of Opalaca and Puca, both of commanding height. They extend to the north-eastward, nearly parallel to those of Omoa, until intercepted by the valley of the Rio Sta. Barbara.

All of these mountains are heavily timbered with pines and oaks. Their lower slopes, and the valleys at their feet, produce the cedar, mahogany, and other valuable woods in great abundance. In the Mountains of Merendon is found the *Quetzal*, the royal and sacred bird of the aboriginal kingdom of Quiché, and one of the most beautiful found in the world.

Like all other parts of Honduras, this department is profusely watered. In it rise some of the largest streams of Central America. To the west of the Mountains of Merendon, and rising in its gorges, are the small rivers Gila and Gualan, which flow into the Motagua. Flowing along the eastern base of the same range is the Rio Chamelicon, which has its rise a few leagues to the northward of the town of Sta. Rosa. It forms a valley of great beauty and fertility, which, like that of Copan, abounds in monuments of a large aboriginal population. The river Santiago or Venta, which, after its junction with the Humuya, is called the Ulua, has its sources in the great plain of Sensenti, where it bears different names—Rio de la Valle, Alas, Higuito, and Talgua. Its first great trib-

utary in this department is the Rio Mejicote, or Gracias, flowing along the eastern base of the Mountains of Selaque. Below the point of junction, the Santiago is a large, unfordable stream. Along the southern border of the department, and constituting the boundary separating it from San Salvador, is the River Sumpul, one of the largest affluents of the great river Lempa, flowing into the Pacific. It receives several considerable tributaries from the territories of this department. Among them may be mentioned the Guarajambala, Pirigual, Moscal, and Cololaca.

Perhaps the most interesting topographical feature of this department is the plain or valley of Sensenti, lying between and almost encircled by the Mountains of Selaque, Pacaya, and Merendon. It is about thirty-five miles long by from five to fifteen in width. It is nearly divided by a range of hills, which extend partially across it in the neighborhood of Corquin. The upper valley might, with propriety, be called that of Sensenti, the lower one the plain of Cucuyagua. The latter has an average altitude of 2300 feet, and the former of 2800 feet above the sea. The soil throughout is good, and the climate delightful. It constituted part of the dominions of the aboriginal cazique Lempira, who resisted the Spaniards longer than any chief in Central America. The army with which he encountered the Spanish general Chaves was more numerous than the present entire population of the department.

The climate of the department is unexcelled for salubrity. The general temperature, as might be inferred from the elevated character of the country, is cool, although no two places can, in this respect, be said to be alike. Their climate varies with their elevation. Intibucat, an Indian town, situated in the midst of a con-

siderable plain or terrace of the Opalaca Mountains, is 5200 feet above the sea. Occasional slight falls of snow take place here during the months of December and January. I passed through the town in the early part of the month of July, when the thermometer at sunrise stood at 56° of Fahrenheit. Peaches, apples, and plums flourish in this plain, and the blackberry is indigenous among the hills. The towns of Caiquin and Colocte have a temperature still lower than that of Intibucat. During three weeks which I spent at Sta. Rosa, from July 9 to August 1, the average temperature at sunrise was 68°, at noon 72°, and at 3 P.M. 73° of Fahrenheit. From September to February the thermometer has a still lower range.

The vegetable products of this department, actual and possible, exhaust the list of productions of the temperate zones and the tropics. Wheat, rye, barley, the potato, etc., grow on the mountains, while sugarcane, indigo, tobacco, cotton, coffee, cacao, plantains, oranges, etc., flourish in the plains and valleys. Of valuable timber there is also great abundance. Pine, equal to the best North Carolina, covers the hills. There is also much mahogany, cedar, granadillo, Brazil wood, mora, etc., for purposes of dyeing, manufacture, and construction. Copal, balsam, and liquid amber are among the most common gums. The tobacco of Gracias, as will be seen farther on, has a wide and deserved celebrity.

Apart from its agricultural wealth, Gracias is distinguished for its minerals and precious metals. Gold and silver mines are numerous and rich, although but little worked, for want of scientific knowledge, intelligence, machinery, and capital. The silver and copper mines of Coloal, in the Mountains of Merendon, are

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very valuable, the copper ores yielding 58 per cent. of copper, besides 98 ounces of silver to the ton. The silver ores of Sacramento yield 8674 ounces of silver to the ton. Coal is also found in the plain or valley of Sensenti, near the half-deserted town of Chucuyuco. I visited the beds at a place where they were cut through by ravines, and found the principal deposit from eight to ten feet thick, separated by bituminous shale from a superior bed about two feet in thickness. The coal is bituminous, and, at the outcrops, of fair quality. Asbestos, cinnabar, and platina are also found in this department. Opals are obtained at various localities, and have been exported to a considerable extent. The most and best have been found near the mountain town of Erandique.

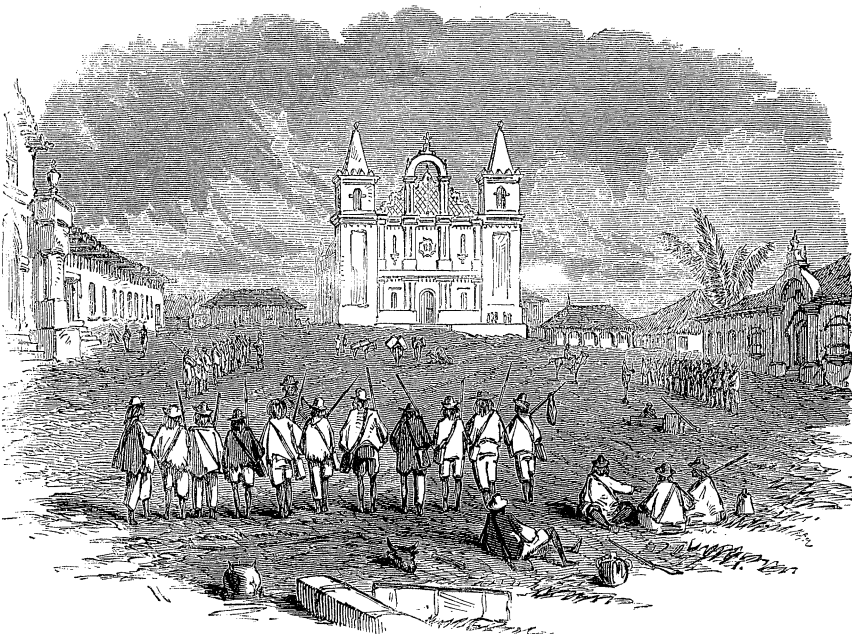
It appears from the official paper of Honduras that, from the 1st of April, 1851, to the 31st of January, 1853, there were "denounced," or entered, in accordance with the mining laws, not less than *sixteen* opal mines in the single district of Erandique. In the department at large, for the same period, were entered thirteen silver mines, one gold mine, and one coal mine. Amethysts are reported as having been found near Campuca.

Near the little town of Virtud, in the extreme southern part of the department, is a curious natural phenomenon, known as *Mina ó Fuente de Sangre*, Mine or Fountain of Blood.* From the roof of a small cavern

* "A little to the south of the town of Virtud is a small cavern (*gruta*), which during the day is visited by the buzzards and *gabilanes*, and at night by a multitude of large bats (*vampiros*), for the purpose of feeding on the natural blood which is found here dropping from the roof of the cavern. This grot is on the borders of a rivulet, which it keeps reddened with a small flow of a liquid that has the color, smell, and taste of blood. In approaching the grot a disagreeable odor is observed, and when it is reached there may be seen some pools of the apparent blood in a state of coagulation. Dogs eat it eagerly. The late Don Rafael Osejo undertook



PLAZA OF TOWN OF INTIBUCAT—GRACIAS.



CHURCH AND PLAZA OF SANTA ROSA—GRACIAS.

there is constantly oozing and dropping a red liquid, which, upon falling, coagulates, so as precisely to resemble blood. Like blood, it corrupts; insects deposit their larvæ in it, and dogs and buzzards resort to the cavern to eat it. In a country where there is so little scientific knowledge as in Central America, a phenomenon of this kind could not fail to be an object of great, if not superstitious wonder, and many marvelous stories are current concerning the Fountain of Blood. Attempts have several times been made to obtain some of this liquid for the purpose of analysis, but in all cases without success, in consequence of its rapid decomposition, whereby the bottles containing it were broken. By largely diluting it with water, I succeeded in bringing with me to the United States two bottles of the liquid, which I submitted to Professor B. Silliman, Junior, for examination. It had, however, undergone decomposition, and was very offensive. It had deposited a thick sediment, containing abundant traces of original organic matter. The peculiarities of the liquid are doubtless due to the rapid generation in this grotto of some very prolific species of colored infusoria.

DEPARTMENT OF CHOLUTECA.

Districts.—Nacaome, Amapala, Choluteca, El Corpus, San Marcos, Namasigue, Oropoli, and Pespire.

Principal Towns.—Choluteca, Nacaome, Amapala, Pespiri, San Marcos, Namasigue, etc.

Choluteca is the extreme southern department of Honduras, fronting on the Bay of Fonseca. It lies on the western slope of the Mountains of Lepaterique or Ule, among which the streams that water it take their

to send some bottles of this liquid to London for analysis, but it corrupted within twenty-four hours, bursting the bottles."—*Gaceta de Honduras*, February 20, 1853.

rise. It is, consequently, extremely diversified in surface. The valleys of the rivers Choluteca and Nacaome are broad and fertile, and the district fronting on the bay is distinguished for its extensive savannas and densely-wooded alluvions. For an average distance of fifteen miles inland, the soil is admirably adapted for plantations, and undoubtedly capable of producing in profusion all the staples of the tropics. As the country rises, which it does by a series of terraces, the savannas become broader and more numerous, affording vast pastures for herds of cattle, which at present probably constitute the chief wealth of the department.

The Mountains of Ule, or Lepaterique, which bound the department on the north, are not less than 5280 feet in height at the point where they are crossed by the high road from Nacaome to Tegucigalpa. Their summits are broad, undulating plains, cool, salubrious, and fertile, and literally constitute the granaries of the adjacent mineral districts. Wheat, potatoes, and especially maize, have there a vigorous and most productive growth. Hail, and occasionally snow, falls there, and in a few instances it has been known to fall in sufficient quantities to whiten the ground for several days. From the summits of the Ule Mountains the eye takes in a landscape more than a hundred miles broad, from the great blue masses of the Mountains of Sulaco on the north, to the volcanoes of Nicaragua and the Gulf of Fonseca on the south and southeast.

From these mountains the traveler also obtains a fine view of the valley of Choluteca, which sweeps in luxuriant beauty around its base, the course of its river being clearly defined by the belts of evergreen forests which grow upon its banks. This view is obtained through the broad, dependent valley of Yuguare,

celebrated, even in Honduras, for its surpassing beauty and exhaustless resources. In this valley are several considerable Indian towns, whose inhabitants are distinguished alike for their industry, bravery, and republican spirit. Those of Texiguat and of Cururen obtained great distinction in the wars which preceded the dissolution of the republic of Central America, and are now among the most loyal and faithful citizens of the state, and its bravest defenders.

Apart from its agricultural wealth, the Department of Choluteca is rich in minerals, but chiefly in mines of silver. Among the latter is the famous mine of Corpus, near Choluteca, which, under the crown, was regarded of so much importance as to induce the Audiencia to establish a branch of the treasury there, in order to receive the royal fifths. It is now worked in a very small way, the shafts having been filled with water, and the adits obstructed with fallen rock. The mines of Cuyal and San Martyn, also found in this department, are now worked profitably on a small scale. Their value is much enhanced by their proximity to the Gulf of Fonseca, through which the requisite machinery can be brought within reach. Mills have recently been established on the island of Tigre for sawing the cedar, mahogany, and other valuable woods which are found in great abundance on the coast, for exportation to Chili, Peru, and California.

The islands of Tigre and Sacate Grande, which have already been noticed (see p. 96), as also the free port of Amapala, fall within the jurisdiction of this department. Choluteca, which has a population of about four thousand souls, is nominally the capital, but the seat of administration has for a number of years been at Nacaome. This town is situated on the river of the

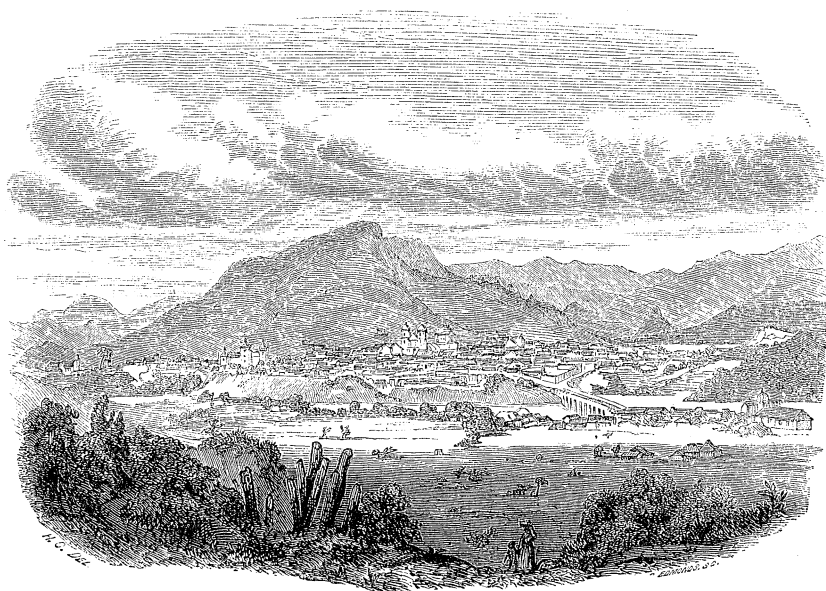
same name, about eight miles above its mouth, and has a population of about two thousand inhabitants. A few leagues above, on the same stream, is the considerable town of Pespíri. In the vicinity of Nacaome, at a place called "Aguas Calientes," there are several hot springs, much esteemed for their medicinal properties.

DEPARTMENT OF TEGUCIGALPA.

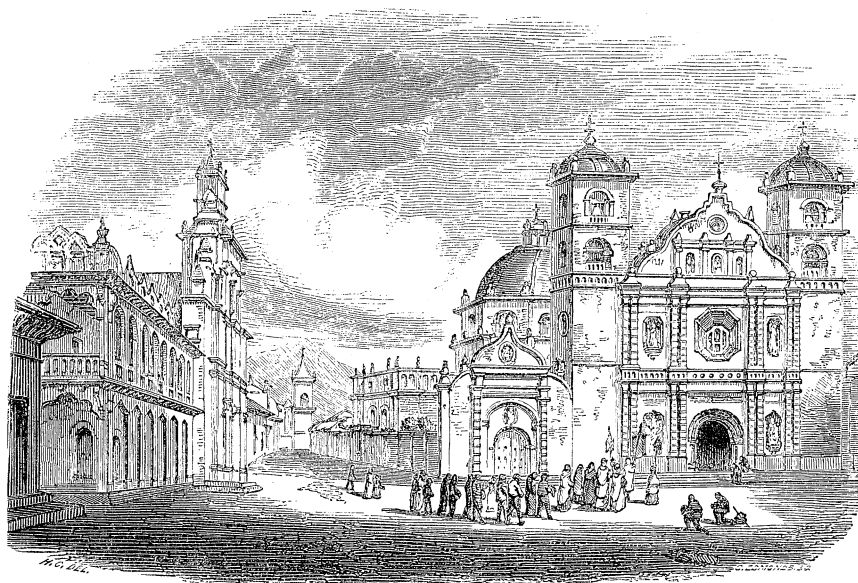
Principal Towns.—Tegucigalpa, Yuscuran, Cedros, San Antonio Mineral, Yuguare, Agalteca.

The Department of Tegucigalpa is the smallest, but relatively the most populous of the political divisions of Honduras. It may be described as occupying a great interior basin or plateau, bounded on the north and west by the Mountains of Sulaco and Comayagua, and the south and east by those of Ule and Chili. The average elevation of this mountain-bound plateau is not less than three thousand feet above the sea. It is drained by the River Choluteca, which nearly describes a circle in tracing its course among the mountains, through which it breaks by a deep and narrow gorge or valley into the broad and rich plains of the Pacific coast.

The temperature of the department is cool, and its climate can not be surpassed for salubrity. Its soil is not generally so productive as that of the remaining departments, but it excels them all in the number and value of its mines. It is, in fact, essentially a mining district; and, until the political disturbances of the country rendered the prosecution of that branch of industry almost impossible, mining was the chief employment of its people, and their principal source of wealth. The mines of Yuscuran are still worked, as are also those of San Antonio and Santa Lucia. The gold and



City of Tegucigalpa, Honduras.



Plaza of Tegucigalpa.

silver mines of San Juan Cantaranas are second to none in the state in value, but they are not largely worked, for precisely the reason which is most likely hereafter to commend them to American and European enterprise. The natives can not be induced to establish themselves in their vicinity, *on account of the coldness of the climate*. The Mountain of Agalteca, in the northwest portion of this department, is a vast mass of very pure and highly magnetic iron ore. Some of the ore has so large a percentage of metal, that it is forged directly from the mine, without undergoing the previous process of smelting.

Since the decline of the mining interest, the proprietors of this department have engaged largely in the raising of cattle, many of which are driven to San Salvador and Nicaragua for sale.

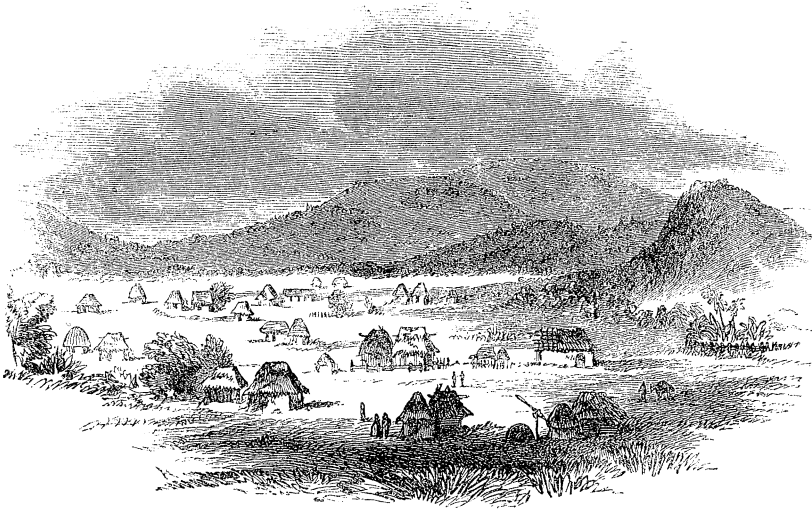
Tegucigalpa, the capital of the department, is the largest and finest city in the state, numbering not less than twelve thousand inhabitants. It stands on the right bank of the Rio Choluteca, in an amphitheatre among the hills, and is substantially and regularly built. It has not less than six large churches. The Parroquia is hardly second to the Cathedral of Comayagua in size. A fine stone bridge, of ten arches, spans the river, and connects the city with the suburb called Comayaguita. It had formerly several convents and a University, the last of which has still a nominal existence. It has also a mint, but it is now only used for the coining of the copper or provisional currency, which circulates in the central departments at a greatly depreciated value. The trade of Tegucigalpa was formerly carried on through the ports of Omoa and Truxillo, but, since the establishment of the free port of Amapala, it has chiefly taken that direction.

DEPARTMENT OF OLANCHO.

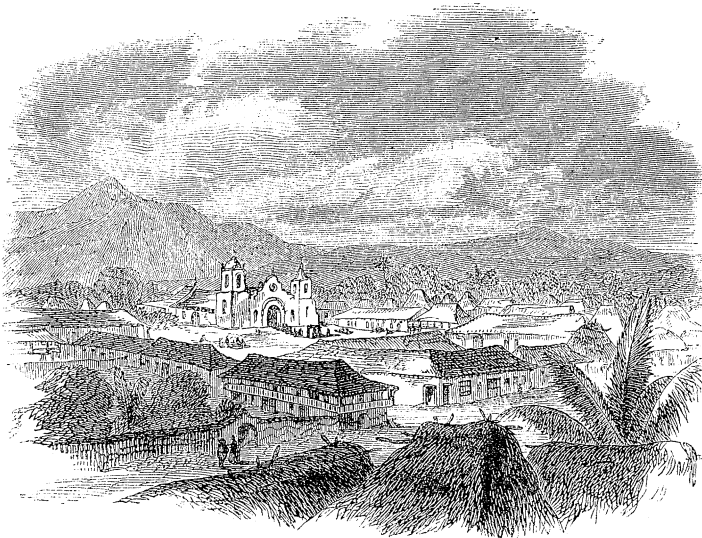
Principal Towns.—Juticalpa, Catacamas, Campaminto, Silca, Monte Rosa, Yocon, Laguata, Danli, Teupasenti.

The Department of Olancho joins that of Tegucigalpa on the east. It has an area of not less than 11,300 miles, or something more than that of the State of Maryland. But a small portion of this wide district is inhabited by a civilized population, the greater part, comprising the entire eastern half, being in the possession of Indian tribes, known as Xicaques, Payas, Pantasmas, and Toacas. The Spanish settlements are almost entirely confined to the large interior plateau, generally called Valley of Olancho, in which the great river Patuca, and the hardly less important streams known as Rio Tinto and Roman or Aguan, take their rise. This valley is represented as undulating, fertile, and chiefly covered with luxuriant savannas, supporting vast herds of cattle, which constitute the chief wealth of the people. In this respect, indeed, Olancho is distinguished above any other equal extent of Central, or perhaps of Spanish America.

From its elevation and the proximity of the mountains, Olancho has a cool and healthful climate. Its people are industrious, and live in the possession of all of the necessities and many of the luxuries of life. From their geographical position, away from the centres of political commotion, they have enjoyed comparative quiet during all the disturbances to which the country at large has been subjected. This circumstance has been favorable to the accumulation of property, and the department is therefore relatively the richest in the state.



TOWN OF CAMPAMIENTO—OLANCHO.



INDIAN TOWN OF CATACAMAS—OLANCHO.

Its exports are cattle, hides, deer-skins, sarsaparilla, tobacco, and bullion, which are chiefly taken to Omoa and Truxillo; a portion, nevertheless, goes, by the way of Tegucigalpa, to the Gulf of Fonseca. Next to its herds of cattle, its principal sources of wealth are its gold-washings. Nearly all the streams in the department carry gold of a fine quality in their sands. These washings were distinguished for their richness at the time of the conquest, and have ever since maintained a local celebrity. But the jealous policy of Spain was effectively directed to the suppression of all knowledge of the wealth and resources of these countries, and their condition since the independence has been unfavorable to their development. There can, however, be but little doubt that the gold-washings of the rivers Guayape and Mangualil, and their tributaries, are equal in value to those of California, and must soon come to attract a large share of attention both in the United States and in Europe. At present the washings are only carried on by the Indian women, who devote a few hours on Sunday mornings to the work, living for the remainder of the week upon the results. A farther notice of the mineral wealth of this department will be found in the chapter on mines and minerals.

Juticalpa, capital of the department, ranks third in the state in respect of size. It is delightfully situated on a small tributary of the Guayape, not far from the principal stream, and is reputed to contain 10,000 inhabitants. Near it is the large Indian town of Catacamas, and there are other considerable towns of Indians scattered throughout the valley. These Indians are proverbial for their peaceful disposition and industrious habits.

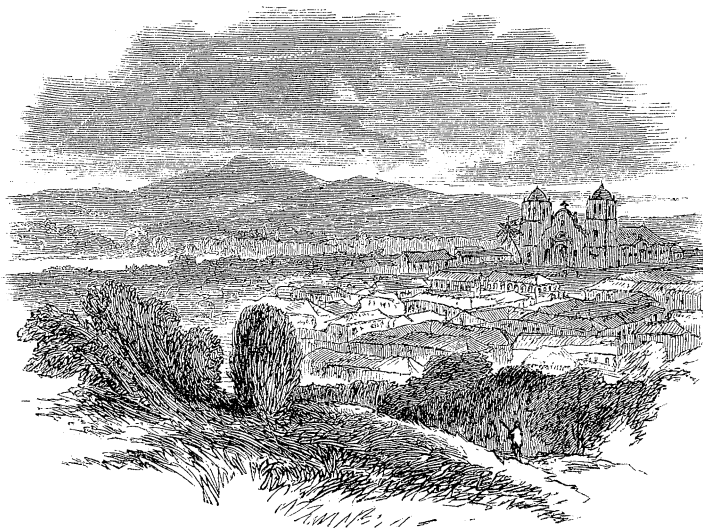
The communication between the valley of Olancho

and the coast is chiefly carried on by mules, through the valley of the River Aguan, to Truxillo. A road was formerly opened through the valley of the Rio Tinto, but it was rough and difficult, and soon abandoned. There exists a much easier means of communication by way of the Rio Patuca, which is navigable as far as the Puerto de Delon, within a few leagues of Juticalpa. But the absence of a good port, as well as of commercial establishments at the mouth of the river, has rendered this natural highway of but little value. It is now chiefly used in floating down mahogany, which grows in large quantities on its banks. But even this trade is embarrassed by the difficulty of loading the wood in the open roadstead off the bar of the river. How far the Wanks River may ultimately be made useful to the trade of this department and that of Segovia, in Nicaragua, can only be ascertained by a survey of that stream, the capacities of which are now but little known.

DEPARTMENT OF YORO.

Principal Towns.—Yoro, Olanchito, Truxillo, Negrito, Jocon, Sonaguera Sulaco, and Cataguana.

The Department of Yoro comprehends all the northern part of Honduras lying eastward of the River Ulua. Its area is upward of 15,000 square miles—equal to the three states of Massachusetts, Connecticut, and Rhode Island; but, while the largest department in size, it is the smallest in respect of population. Its surface is exceedingly diversified. It is made up of a series of valleys, formed by the numerous streams which flow down from the interior into the Bay of Honduras. These have a direction from south to north, and, except on the very shores of the bay, where the



VIEW OF JUTECALPA—OLANCHO.



STREET IN JUTECALPA—OLANCHO.

country is plain and alluvial, are separated from each other by a corresponding number of ridges, or mountain spurs or ranges, of various elevations. Communication transversely to these valleys and mountain ridges is exceedingly difficult, and the population of the department, therefore, has been chiefly concentrated in the valleys of those larger streams which have ports near their mouths, and through which pass the roads leading from the interior to the coast.

The Mountains of Pija and Sulaco rise in the western part of this department, and form the eastern boundaries of the valleys of the Sulaco and Ulua Rivers. They are terraced and truncated, constituting elevated savannas, sparsely covered with pines; but their soil is comparatively poor, and they have consequently failed to attract population from the more favored portions of the state. Tradition points to them as containing great mineral wealth, but they have never been adequately explored, and nothing can be affirmed in this respect with any degree of certainty.

The valleys of all the streams abound in precious woods, and the department may be described as comprising the great mahogany district of Central America. There are "*cortes*," or cuttings, on nearly all the streams which from their size admit of the wood being floated down to the coast. The inhabitants are chiefly mahogany-cutters by occupation, having their temporary residences at the various "*cortes*" during the season of cutting, and retiring to their homes and plantations when it is ended.

On the upper waters of the streams, and among the mountains and hills which intervene between the coast and the valley of Olancho, are found the remnants of the once famous and indomitable nation of Xicaque In-

dians. Their numbers are not known, but are estimated at not far from seven thousand. They are peaceful and inoffensive, and traffic freely with the Spaniards, collecting sarsaparilla, India-rubber, and skins, for the purpose of exchange for such few articles of civilized manufacture as they may require.*

The greater portion of the great plain of Sula, described below, falls within this department. To the eastward of this plain, and, in fact, constituting an extension of it, is a vast tract of rich and valuable territory, known as *Costa de Lean*. It has equal capacities with the plain of Sula for agricultural purposes, and in this respect holds out inducements inferior to no other part of Central America or the West Indies. The proximity of the mountains, absence of marshes, abundance of good water, and exposure to the sea-breezes, are circumstances favorable to its salubrity, and must have an influence in directing to it the attention of emigrants and planters. The valleys of Sonaguera and Olanchito may also be mentioned as equally remarkable for their beauty, fertility, and general resources.

Yoro, a town of about three thousand inhabitants, is the capital of this department. Truxillo, already described (p. 102), is its principal seaport.

DEPARTMENT OF SANTA BARBARA.

Districts.—Omoa, Sta. Barbara, Yojoa, San Pedro.

Principal Towns.—Sta. Barbara, Yojoa, Omoa, San Pedro Sula, Quimistan, Trinidad, Ilama, Sacapa.

This department lies to the northward of Gracias and Comayagua, and intervenes between these departments

* A large number of Carib Indians, emigrants from the island of San Vincent, are also established in this department; but, as a full account of them has been given elsewhere, it is unnecessary to speak of them in this connection.

and the Bay of Honduras. It is traversed by several large streams. The Ulua runs through it from south to north, and the Blanco, Santiago, Sta. Barbara, and Chamelicon also flow through it in other directions. The valleys of these rivers afford large tracts of level and fertile lands, well wooded, and capable of vast production.

The great plain of Sula, which may be said to commence at Yojoa, is a distinguishing feature of this department. It is not only of great extent, but of unbounded capacity. The early accounts of the country represent it to have been densely populated by the aborigines. It is now mostly covered by a heavy forest, relieved only by a few narrow patches of cultivated grounds in the vicinity of the towns which are scattered along the *camino real*. This forest abounds in valuable woods, and from it a greater part of the mahogany exported from Honduras has been derived. The Chamelicon and Ulua are the natural channels through which the mahogany has been, and still is, carried to the sea-side. That portion of the plain of Sula lying to the eastward of the River Ulua is included in the Department of Yoro. Taking it as a whole, it may be estimated as having a base of sixty or seventy miles on the Bay of Honduras, reaching inland, in the form of a triangle, to Yojoa, a distance of upward of fifty miles, and comprising an area of not less than fifteen hundred square miles. In the future development of the country, this plain will attract the first attention, not less on account of its valuable natural products, than its easy access through good ports, its navigable rivers, and rich and easily-cultivated soil, adapted to the production of cotton, rice, sugar, cacao, and the other great staples of the tropics. A variety of the cacao, called *cacao*

mico, and said to be equal, if not superior, to the celebrated cacao of Nicaragua and Soconusco, is indigenous here, and the inhabitants draw their supply from the wild trees in the forest. The vanilla and sarsaparilla are also abundant. Copal-trees, India-rubber, rosewood, dragon's-blood, and other useful trees and precious woods, are found in profusion, and will ultimately contribute to swell the exports and augment the wealth of the state. Vast numbers of palms, of every variety, relieve the monotony of the forest with their graceful forms. At one point on the banks of the Ulua, a few leagues above its mouth, is a natural park of the cocoanut-palm, which extends along the river for several miles.

In the neighborhood of Yojoa the country rises by a series of magnificent terraces, which open out in broad, undulating savannas. Their soil is good, and, apart from their natural adaptation for grazing purposes, they admit of profitable cultivation. These terraces are represented as constituting the distinguishing features of the country around the city of Santa Barbara, where the principal part of the population of the department is concentrated.

The great dependent mountain chain of Merendon, elsewhere alluded to as dividing the valleys of the Chamelicon and Motagua, and terminating abruptly on the sea at Omoa, affords, on its slopes, favorable conditions, both of soil and climate, for the cultivation of the grains and fruits of higher latitudes. It moreover seems to be rich in gold, which is found, more or less abundantly, in all the streams which flow down its southern declivity. In the neighborhood of Quimistan there are washings which have long been celebrated for their productiveness. In that portion of

this chain back of Omoa, and overlooking the plain of Sula, are vast beds of white marble of spotless purity, fine, compact, and susceptible of exquisite finish. It more closely resembles the marbles of Carrara in Italy than any of those found in the United States. It is easy of access, and may be obtained in any desirable quantity.

The fine, capacious harbor of Puerto Caballos, and the small but secure port of Omoa, both fall in this department. They are fully described under the subdivision of "Ports of Honduras."

The inhabitants of this department are chiefly devoted to the raising of cattle, of which large numbers are exported to Belize and Yucatan, and driven into Guatemala, where they command prices ranging from five to ten dollars per head. A large part of the people in the towns in the plain of Sula, or bordering upon it, are employed in the mahogany cuttings, while a few, chiefly Indians, collect sarsaparilla, or occupy themselves, at intervals, in washing gold. Altogether, the department is healthy, and possessed of vast resources, the value of which is enhanced by the natural facilities which it possesses, both in respect of geographical position and the means of interior communication.

CHAPTER IX.

ASPECTS OF NATURE IN HONDURAS.

THE aspects of nature in Honduras are varied and striking. The conditions of conformation of coast, of elevation and consequent temperature, the amount of rain falling upon the respective declivities of the Cordilleras, all contribute to diversify the forms under which vegetable life presents itself to the eye of the traveler. The three great features, nevertheless, are the coast alluvions, generally densely wooded, the elevated valleys of the interior, spreading out in broad savannas, and the high plateaus of the mountains, sustaining an unending forest of scattered pines, relieved by occasional clumps of oak.

Upon the northern coast, in the broad plain through which the Ulua and Chamelicon find their way to the sea, the country is so low as occasionally to be overflowed for considerable distances. Here grow immense forests of cedar, mahogany, ceiba, India-rubber, and other large and valuable trees, thickly interspersed with palms, whose plumes rise through every opening, and fringe the bases of all the hills. The smaller streams are arched over with verdure, and completely shut out from the sun, while the large rivers gleam like silver bands in fields of unbroken emerald. But even here, where the land is lowest, spread out broad, grassy meadows, the retreats of innumerable wild-fowl, and during the dry season, when the grass on the hills becomes sere and withered, offering abundant support for

herds of cattle. In the depths of these primeval forests the mahogany-cutters prosecute their laborious calling, rousing the echoes with the ringing strokes of the axe and the shouts of the truckmen, who, with twenty oxen attached to a single log, drag the heavy trunks to the edges of the rivers. The broad meadows supply them with food for their cattle, while every company has its hunter and fisher to help out the fixed rations with which it is provided by the proprietors of the establishments.

Farther to the eastward, on the same coast, the heavy forests are confined chiefly to the valleys proper of the rivers, and give place, at little distances inland, to sandy savannas, covered with coarse grass, and clumps of pines and acacias. But the plain country of the coast is every where narrow. The spurs or dependent ridges of the mountain groups of the interior often come down to the very shore. Immediately back of Omoa, within cannon-shot of its fortress, the mountains begin to rise abruptly, and speedily attain the height of nine thousand feet, looking down majestically upon their shadows in the clear waters of the beautiful Bay of Amatique. Such also is the case at the port of Truxillo. The peaks of Congrehoy, and the Mountains of the Holy Cross or Poyas, form gigantic landmarks for the mariner in his approach to the coast of Honduras.

The alluvions of the Pacific coast are also densely wooded, but not extensive. At short distances inland they give place to numerous savannas and *jicarales*, in which the low calabash-tree, with its fruit resembling the apple, conveys to the traveler the idea of a New England orchard. These savannas are studded with clumps of acacias (gum-arabic bushes), and covered with grass; but the pine does not appear on this

side of the continent, except upon the slopes of the hills at an altitude of about twelve hundred feet.

The valleys of all the rivers, on both coasts, are heavily wooded, and covered with *lianes* or vines; but as they are ascended toward the interior, vegetation diminishes, and is reduced to a narrow fringe of trees and bushes upon their immediate banks. These valleys, in the high interior country, often expand into broad and beautiful plains, half savanna, half woodland, the common grounds where the products of the tropics and of the temperate zone, the palm and the pine, flourish side by side. Such are the plains of Espino and Comayagua on the Humuya, of Otoro on the Sta. Barbara, Sensenti on the Ulua, La Florida on the Chamelicon, Olancho on the Aguan, and Yuguare on the Choluteca. In some of these, as in that of Comayagua, the variant forms of cactus become distinguishing features, frequently attaining to gigantic size, and almost taking the character of forests. Here they stud the ground, spherical and spinated, warning man and beast against incautious tread, yet radiating from their grooved sides flowers and fruits of delicate ruby, in shape and color like glasses of tenderest crystal, flowing over with ruddy wine of golden Burgundy. There they rise in tall, fluted columns, appearing in the exaggerating twilight like the ruins of ancient temples. And still beyond we see them, articulated and jointed, spreading their broad succulent palms, silvered with the silky habiliments of the scarlet cochineal, as if in imploration to the sun. And yet again, lavish of contrasting forms, they trail like serpents over the ground, and twine themselves in knotty coils around fallen trunks and among the crevices of the barren rocks. Here, too, the agave appears, with its dense green clus-

ter of spiny-edged leaves, shooting up its tall stem, to flower but once, scatter forth its thousand bulbs, and then to die.

The mountains which rise around these valleys are ascended by terraces, crowned with forests of pines and oaks, and carpeted with grass. The summits of the mountains sometimes run up in peaks, but generally constitute broad table-lands, more or less undulating, and often spreading out in rolling savannas, traversed with low ridges of verdure, and green belts of trees, which droop over streams as bright and cool as those of New England. Here the familiar blackberry is indigenous, and the bushes which impede the traveler are covered with fruit. Wheat-fields, billowing beneath the cool mountain winds, and orchards of peach and apple trees, struggling against man's neglect, give to these districts all the aspects of the temperate zone; and when, at night, bright fires of the pine illuminate every hut, and the picturesque inhabitants cluster around them to receive the warmth which the temperature here renders necessary to comfort, the stranger can scarcely appreciate that he is under the tropics, and within fourteen degrees of the line. The contrast which his experiences of to-day afford with those of yesterday, when he rode among groves of palms, plantains, and oranges, become still more decided when the cold, sleety rain descends from leaden skies, or the sharp hail falls from tumultuous clouds, swept over his head by blasts as chill and pinching as those of a northern November.

But whether in plain, in valley, or on mountain, every where the trees are covered with parasitic plants. Some varieties of cactus, particularly that of which the long, tangled arms are prismatic in form, do not dis-

dain to fix themselves in the forks of the calabash-tree, and overwhelm it with their own more rapid growth. So abundant are these air-plants, that it is sometimes difficult to discover the verdure of the tree to which they are attached. Some are delicate as threads of silk, and others coarse and rank, but all of wax-like beauty, and many producing flowers of brilliant colors. Science would exhaust its nomenclature in distinguishing them, and the traveler is happy to think of them as yet unburdened with the portentous designations of studious Dryasdusts, to whom nature was not given as "a joy forever," but a thing to be classified, and named, and mummified in Greek and Latin cerements.

Upon the higher mountain crests, where the short and hardy grass betokens a temperature too low for luxuriant vegetation of any kind, the air-plants themselves disappear, and the pines and gnarled oaks are draped in a sober mantle of long gray moss, which waves mournfully in the wind, like frayed and dusty banners from the walls of old cathedrals. The rocks themselves are browned with mosses, and, except the bright springs gushing from beneath them and trickling away with a silvery murmur, there is no sound to break the eternal silence. The traveler sees, perhaps, a dark shadow sweep over his path; it is that of the eagle or of the voiceless raven, poising in the sky. Upon some distant rock his eye catches a slight and graceful figure; there is a sudden but noiseless bound, and the antelope of the mountain has disappeared.

The geological features of Honduras are equally marked and impressive. Starting from the Gulf of Fonseca and advancing northward, we leave behind us the volcanic coast-range, with its high, grassy peaks of

scoriæ, and reach at once vast masses of white and rose-colored rock, the outliers of the great sandstone nucleus of the central plateaus. Viewed from a distance, they appear like cliffs of trap or basalt, and take a thousand castellated forms with the changing positions of the traveler. Among these we find occasional beds of blue limestone, and ribs of quartz and greenstone are here and there boldly protruded through the superincumbent rocks, richly veined with ores of silver and of gold.

As we proceed farther inland, the mountains rise by a succession of terraces, deeply furrowed by streams descending to the sea. These terraces prove to be a succession of vast stratified sandstone deposits or beds, presenting abrupt edges, up which the sure-footed mule toils painfully and with difficulty. But when the ascent is accomplished, the traveler finds spread out before him extensive savannas, interspersed with groves of pines, and clumps of oaks and bushes. Often the layer of soil is thin, and a scant vegetation strives in vain to divest nature of its savage aspect. The rocks, exposed and bare, reflect the light of the sun, which shines down through the clear and rarefied atmosphere of these elevated regions with a blinding glare. The weary traveler looks forward with aching eyes, tracing the white line of the solitary path across the arid plain, and urges on his faithful mule, in the hope of finding some narrow valley, worn in the rock by mountain streams, where he may form his lonely camp for the night, in the pleasant company of living trees and running waters.

Suddenly the plateau along which he is journeying breaks away in a few rapid terraces, and reveals, almost beneath his feet, a wide and level plain, mottled with

savanna and forest, threaded with bright streams, and dotted with villages, whose white churches catch the light like points of silver in the landscape. It seems but a little distance there: a stone thrown from the hand might fall in the square plaza, so distinctly defined, of the first village; but hour after hour the traveler toils downward, and night falls, and he sees the gleaming of lights in the valley before the familiar barking of dogs and the instinctive accelerated pace of his mule apprise him that at last he has reached the level ground.

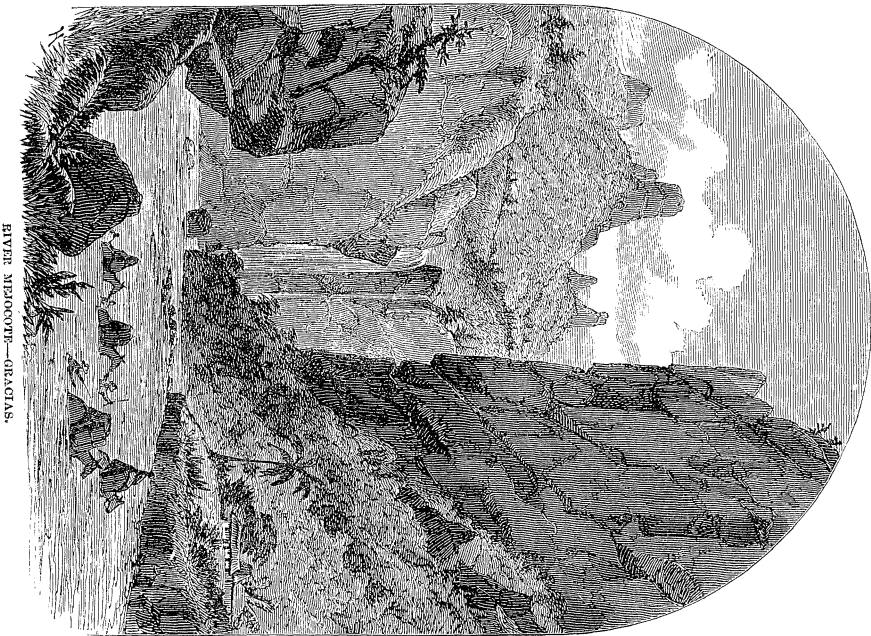
In the western part of Honduras, among the mountains of Corquin, the outline of the country is exceedingly bold and diversified. The rivers, collecting their waters in interior basins, break through the porphyritic mountains and hills which surround them in deep valleys or gorges, with steep and precipitous sides. Yet in these fissures, whose bottoms are only reached by dangerous zigzag paths, are found strips of alluvial soil, where the Indian builds his hut, and the necessary plantain has a luxuriant growth, beneath high and frowning cliffs, bristling with peaks, like gigantic sentinels, along their rocky ramparts.

A greater variety of trees and abundance of verdure cover the hills and mountains of the northern coast, which have, in consequence, a less rugged aspect than those on the Pacific declivity, where the rains are not so constant. The hills are more swelling, and the mountains, though equally elevated, have a softer and more harmonious outline. They present few cliffs or rocky crests, and in their denser forests afford more congenial retreats to the multitudinous forms of animal life which are nurtured in the genial tropics.

Birds of brilliant plumage sparkle in the foliage of



DISTANT VIEW OF GLACIÈRE.



RIVER MENDOCINO—GEAULAS.

the trees, and crowds of monkeys troop among their branches. The tapir, the peccary, and the ant-eater live in their shade, and the puma and the cougar lurk in their recesses. Here, too, are found the boa, the bright corral, and the deadly tamagas. The vanilla hangs in festoons from the limbs, and the sarsaparilla veins the earth with its healing root. And while silver, imprisoned in flinty quartz or crumbling greenstone, tempts men to labor with the promise of rich reward on the other slope of the continent, here gold glitters in the sands of almost every stream.

It is thus that Nature, lavish of her gifts, has comprised within the comparatively narrow limits of Honduras a variety of scenery, as well as of climate and production, unsurpassed by any equal portion of the earth. Upon the coasts she robes herself in luxuriance, draped in vines, crowned with flowers, and her breath is fragrant with aromatic gums, while the sea kisses her feet with its frothy lips. But among the mountains, in sober, monastic robes, she is no longer the productive mother. The wind lifts the gray hair on her serene brow; but even here her lips, though motionless, still utter a language of lofty and holy import to the sensitive ears of her true votaries.

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CHAPTER X.

MINES AND MINERALS.

IN respect of mineral resources, Honduras ranks first among all the states of Central America. Indeed, the mineral wealth of the country at large seems chiefly confined to that system or cluster of mountains which constitutes what may be called the plateau of Honduras. Nueva Segovia and Chontales, the mineral districts of Nicaragua, naturally belong to this mountain system; and the same is true of the mineral district of the Department of San Miguel in San Salvador, which embraces the only mines found in that state. There are a few mines of gold and silver in Guatemala and Costa Rica, but, as compared with those of Honduras, they are insignificant in number and value.*

Mining has indeed been always, and until recently, the predominant interest in Honduras; but no branch of industry suffers so directly from wars and civil dissensions, such as have agitated Central America for the last thirty years. As a consequence, mine after mine has been abandoned, and the works once fallen into decay, there has been neither the enterprise, capital, or intelligence necessary to restore them. The mining districts are studded with decayed mining villages,

* "El estado de Honduras es el mas rico en puntos minerales; alli esta el famoso del *Corpus*, que en otros tiempos produjo tanto oro, que se estableció en él una tesoreria para solo el cobro del derecho de quintos; el departamiento de Olancho en el mismo estado posee el rio *Guayape*, de cuyas arenas se saca, sin beneficio, el oro mas apreciable."—*Montéfur, Centro-America*, xxiii.

whose proprietors have become *hacenderos*, owners of immense grazing estates, on which their former laborers are now employed as herdsmen. A few establishments are still kept up, but the operations are conducted on a very small scale and in a very rude manner, and afford a very imperfect indication of the capabilities of the mines.

Few of the mines were ever opened in conformity with any well-established or intelligent system, nor with any reference to continuous or extended operations. Without adits or machinery for draining, the only means of removing the water which invaded many of the richest were leathern buckets carried on the backs of men, in which manner also the ore was brought up from shafts so narrow as rarely to allow more than one man to work in breaking out the ore. When obtained, it was frequently crushed by heavy stones, beveled on their lower edge, and vibrated backward and forward by men, or else slowly reduced by the rudest and most cumbersome machinery, driven generally by oxen or mules, but occasionally by water. In the latter case the apparatus consisted of a vertical shaft (driven by a wheel moving horizontally), through which passed an arm, having at each end heavy stones attached by chains, which were thus dragged over the ore, in a basin of masonry, until it was reduced sufficiently for amalgamation. This last operation was performed by placing the amalgam in heaps in a "*patio*," or yard, upon a floor of boards, where it remained for several weeks, until the amalgamation became complete, when the mass was washed in troughs, and the result reduced by fire.

But, even under all these difficulties, and rude and expensive processes, mining in Honduras, as I have

said, was formerly carried on extensively and profitably. The mines were seldom worked to any great depth, and their proprietors were often obliged to abandon most of them before they had been carried to the depths where the richest ores are generally found. Others were given up from lack of knowledge of treating the ores; and still others from the lack of roads whereon the ores could be transported to the mills.

There are hundreds of mines scattered over the country, abandoned and filled with water, most, if not all of which could be profitably worked by the application of proper machinery. But as there are now no roads over which machinery can be transported, many of them must await the general development of the country to become of value. The rough and narrow mule-paths in the neighborhood of the ports on both oceans are lined with fragments of heavy and expensive machinery, which men more enterprising than prudent have vainly essayed to introduce into the country. They are enduring monuments of that blind energy which neglects necessary means in its eagerness to attain desirable ends.

Silver ores are most abundant and valuable of any which exist in the state. They are chiefly found upon the Pacific ranges or groups of mountains, while the gold-washings, if not the gold mines proper, are most numerous on the Atlantic slope. The silver is found in various combinations, with iron, lead, copper, and, in a few instances, with antimony. Chlorides of silver are not uncommon, and rank among the richest ores in the country.

The group of silver mines in the neighborhood of Ocotal in Segovia (Nicaragua) enjoy a high celebrity, and are undoubtedly of great value. They yield their

silver in the forms of sulphurets, bromides, and chlorides. Some of the mines give an argentiferous sulphuret of antimony. The mine of Limon, in the vicinity of Ocotal, formerly yielded large quantities of chloride of silver, but is now unworked for want of requisite machinery to keep it free from water. The ores of this district yield variously from 28 to 727 ounces of silver per every ton of 2000 lbs. or 32,000 ounces.

The mineral district of Yuscuran, in the Department of Tegucigalpa, has a high and deserved reputation for the number of its mines and the value of its ores. These are, for the most part, an argentiferous galena, and, when worked, yield from 63 to 1410 ounces per ton. The mines throughout this department and that of Choluteca yield a similar ore, generally occurring in a matrix of quartz, with varying proportions of brown blende, and sulphurets of zinc and iron, and oxydes of iron.

The mines of the Department of Gracias are equally celebrated with those of Tegucigalpa. Some remarkable combinations of silver are found in their ores. The upper, or old mine of Coloal has sulphuret of copper (copper glass), galena with sulphuret of silver, and in parts copper pitch ore and black copper, the whole yielding fifty-eight per cent. of copper, besides from seventy-eight to eighty-four ounces of silver to the ton. The ores of the new mine of Coloal are a combination of chloride of silver, a little sulphuret of silver, oxyde of iron and antimony, mixed with earthy matter, and yield the somewhat startling proportion of 23.63 per cent., or 8476 ounces per ton of 2000 lbs.!

Dependent upon the silver deposits of Honduras are those of the Department of San Miguel, in San Salvador. The silver occurs generally in the form of sul-

phurets, in combination with galena, iron, black blende (sulphuret of zinc), in quartz and greenstone matrices, interspersed with threads and crystals of native silver. The particular mines known as those of "El Tabanco" are richest, and yield from 100 to 2537 ounces per ton. These have been extensively and profitably worked, and derive a large part of their value from their proximity to the Bay of Fonseca.

Gold mines are not uncommon in Honduras, but, excepting those of San Andres in the Department of Gracias, and in the vicinity of San Juan Cantaranas in Tegucigalpa, they are no longer worked. The principal supplies of this metal in the state are drawn from the gold-washings of Olancho, which are exceedingly productive. The River Guyape has always enjoyed great celebrity for the amount of gold contained in its sands; but, since the early periods of Spanish occupancy, washing has not been carried on except on a very small scale by the Indians, and even with them the process is generally left to the women and children, who only work for a few hours on Sunday mornings. Yet the amount thus obtained and carried into Juticalpa in the year 1853 was valued at \$129,600.

The following paragraphs in reference to the gold district of Olancho are extracted from a private letter from Dr. Charles Doratt, who visited that region in 1853:

"Among the rivers of Olancho, which we visited and 'prospected,' the Guyape and Jalan are decidedly the richest in auriferous sands. These two rivers unite a little below Juticalpa, the capital of Olancho, and form the Rio Patuca or Patook (see *ante*, p. 79). The gold deposits on the Guyape commence properly at a point called Aleman, continuing thence up the river, the



THE RIVER GRAVE.

banks upon both sides containing much fine gold. We found gold in the alluvions half a mile distant from the present bed of the river. Leaving Juticalpa in a northeast direction, and crossing the department near Yocon, over an area of twenty leagues long and ten broad, there is not a streamlet, however insignificant, which does not contain gold both in its sands and in the banks which border it. For the most part, these streams follow the courses of the mountains, and fall into the Guyape and Jalan. The remaining ones, including the Sisaca and Mangualil (the latter carrying gold of larger size than the others), run into the 'Rio Mirajoco,' which, taking the name of Taguale, after fertilizing the beautiful valley of Olancho, reaches the sea near Truxillo. In these larger rivers the gold is found in deposits near the bends and rapids. The finest gold is from the Guyape, Jalan, and Mangualil, in the Department of Olancho, and the Sulaco, Caymito, and Pacaya in that of Yoro. * * * At Aleman the women only wash the sand on Sunday mornings, and, with the aid of their miserable *batteas*, in a few hours procure a sufficient quantity of the metal to supply their wants for the ensuing week. It is sold on the spot at from \$11 50 to \$12 per ounce. At Guajana the gold is found in a soft slate, and at San Felipe in a red, ferruginous earth. About five leagues from Danli, the Jalan produces well, and at the time of my visit there were more than a hundred men and women engaged in washing. They also used the *batteas*, and never went more than two or three feet below the surface."

The southern districts of Honduras, bordering on Nicaragua, bear also rich *placers* of gold, whence the Indians annually take considerable quantities. The

same is true of the northern districts of the Department of Sta. Barbara. The streams which flow from the Mountains of Omoa into the Rio Chamelicon, and especially those in the vicinity of the town of Quimistan, all carry gold in their sands. Miners properly provided with implements for washing could not fail to secure here a rich reward for their labor and enterprise.

Honduras has also mines of copper of unsurpassed richness and value. The ores in all cases contain considerable proportions of silver. Those of Coloal, in Gracias, already alluded to, contain 58 per cent. of copper, besides about 80 ounces of silver to the ton. The ores from the mine of Guanacaste, Department of Olancho, give upward of 80 per cent. of pure copper, besides 2.9 per cent. of silver, equal to 1039 ounces of silver per ton. But, notwithstanding their great richness, these mines have been always neglected by the mining interest, or worked primarily for the silver which they contain in combination with the copper. Under the peculiar circumstances of the country, and principally from the difficulty of communication, the production of this metal has hitherto been regarded as unprofitable, and the pure copper as hardly worth its transportation to the coast; but, with improved means of communication, and the introduction of modern improvements in reducing the ores, the copper mines of Honduras must become one of the principal sources of wealth to the state. There are some mines of this metal in the neighborhood of the Gulf of Fonseca from which it has been customary for the merchants to ballast vessels, or fill out the freight of those bound for England or Germany, where the ores have always commanded a good price, and yielded a fair return to the

shippers, notwithstanding the difficulty and cost of transportation to the coast.

Byam, who visited Nicaragua and Honduras for mining purposes, describes the copper ores as, for the most part, "uncombined with sulphur," and not requiring calcination. He adds, that "they may all be smelted in a common blast furnace, with the aid of equal quantities of iron stone, of which there is abundance in the hilly country. The ores are what the Spanish miners call *metal de color*, red and blue oxydes, and green carbonates, with now and then the brown or pigeon-breasted. They cut easily and smoothly with the knife, and yield from 25 to 60 per cent. The veins are generally vertical, and the larger ones run east and west."

Iron ores are common, but none of the mines of this metal are worked, except those of Agalteca in Tegucigalpa. The ore is highly magnetic, and so nearly pure that it is forged without smelting. It occurs in vast and exhaustless beds, and the metal might be produced in any desirable quantity; yet, within ten leagues of the mine, in the same department, it sells at the rate of from \$10 to \$12 per *quintal*, equal to \$200 per ton!

Platina is said to exist both in the departments of Choluteca and Gracias, but the mines have never been worked. Cinnabar has also been found at several points, but probably not in sufficient quantities to admit of being reduced with profit. Zinc occurs in various combinations, and superior ores of the metal are found in great abundance on the islands of Guanaja (Bonacca) and Roatan. Antimony and tin also exist, but whether in such combinations as will admit of their economic production remains to be proved by experiment.

The opal mines of Gracias are worked to a large extent, and have been very productive. Some of the stones are large and beautiful, but most have suffered at the hands of the Indians, who estimate their value rather from their numbers than their size, and consequently break them in small pieces.

No means exist for determining the annual product of the opal mines, but it may be partially inferred from the fact that the mines or workings in the department are not less than one hundred in number. Amethysts are also reported as having been found in this department, but none have fallen under my notice. Asbestos is known to exist, and, there is reason to believe, might be produced in quantities sufficient to meet all demands.

Coal has been discovered in several localities. The beds in the valley or plain of Sensenti are very extensive. I visited those in the neighborhood of the village of Chucuyuco, at a point where they are cut through by the streams flowing down from the Mountains of Merendon into the Rio Higuito. The lower bed is about eight feet in thickness, separated from an upper stratum, which is two feet in thickness, by a layer of bituminous shale. The coal is what is called "brown coal," which is of a later formation than that familiarly known as "*pit coal*," which occurs beneath the new red sandstone. It is a tertiary formation of the era of the chalk of the Mississippi Valley. This coal occurs in vast layers in various parts of Germany, where it is extensively used for smelting metals in reverberating furnaces. Specimens of the Sensenti coal gave the following results:

Specific gravity	.	.	.	.	1.504
Ashes	.	.	.	.	25 per cent.

But these specimens were taken from the exposed faces

of the beds, where they were washed by the streams, and were consequently much infiltrated with foreign substances. The area of the beds is not known, but they probably extend below the greater part of the plain or valley. Situated so far inland, it is not presumed that these beds can ever have more than a local value in the reduction of the rich silver and copper ores found in the neighboring mountains.

Other beds of coal are said to exist in the valley of the Sulaco River, Department of Comayagua, and in the neighborhood of Nacaome, Department of Choluteca, but I am in possession of no positive information in respect to them. There are some beds in the valley of the River Torola, which will be more fully noticed when I come to speak of the coal deposits of the valley of the River Lempa, State of San Salvador.

In addition to these brief notices of the mines and minerals of Honduras, I may mention that an abundance of fine white, blue, and veined limestone is scattered throughout every department of the state. Large beds are found within a few miles of the Gulf of Fonseca, and extend thence through the valley of the Rio Goascoran, plain of Comayagua, and valley of the Humuya, to the Bay of Honduras. The hills and mountains back of Omoa have exhaustless quarries of a fine, compact white marble, remarkably free from faults and stains, and well adapted for statuary and ornamental use.

It is impossible, from the same want of data which I have deplored in respect to every other branch of industry, to form an accurate or satisfactorily approximate estimate of the past or present production of the mines of Honduras. It is alleged by persons whose antecedents entitle their statements to weight, that up-

ward of \$3,000,000 in gold and silver were annually exported from the northern parts of the state during the later years of its provincial existence. Since the independence, a small export duty has existed on bullion, but the facilities for evading the law have been such that it is not likely that one tenth part of the amount sent out of the country has come upon the records of the customs. Any statement upon the subject must therefore be purely conjectural.

In 1825, a statement was made by the Master of the Mint of the Federal Republic of the amount of gold and silver coined for the period of fifteen years previous and subsequent to 1810. He reported as follows:

“For fifteen years, ending 1810, were coined 285 marks of gold, 253,560 marks of silver, collectively valued at \$2,193,832.

“For fifteen years, ending 1825, 1524 marks of gold, 423,881 marks of silver, equal in value to \$3,810,383.”

But the amount coined in the mint of Guatemala was insignificant in comparison with the aggregate product of the country during the same period. Where there was one dollar of coin from the mint in circulation, there were twenty dollars which were without the government stamp, mere rough pieces of pure gold and silver, which were received and paid out by weight.* Furthermore, during that period, with the exception of indigo and cochineal, the precious metals constituted the principal export of the country. Upon this point the report above quoted observes: “It must not be deduced from these statements that the amount of gold

* Thomas Gage, an English friar, who resided for twelve years in Guatemala, about the middle of the seventeenth century, has left us some facts which go to show the large and unrecorded production of the precious metals at that period. He speaks of one hundred mules entering the city of Granada “laden with gold and silver, which was the king’s tribute.”—*New Survey of the West Indies*, p. 421.

and silver coined indicates the amount produced in the country. Apart from the amount manufactured into ornaments and used for other purposes, there has been a great quantity exported, particularly since 1821. It is positively known that the merchants of Honduras and other parts have exported great quantities of gold and silver bullion, so that, according to the calculations of intelligent persons, not one tenth part of the production of these metals has passed into the mint. On this account, it is impossible to state exactly the actual produce of each year, and much less the amount exported, because the greater part has been effected clandestinely. In all the territories of the republic there are mines in abundance, but particularly in the State of Honduras, where the greatest number are to be found, and where Nature presents her greatest mineral wealth.* * * M. Gourmez, a mining engineer, who has visited most of the mines of Honduras, assures me that it is easier to find mines than men to work them; and that, if labor and means of communication existed, our mineral productions might in a short time rival those of Mexico and Peru.”*

It should be observed that Honduras has adopted, without modification, the famous “*Ordenanzas de la Minería*,” or mineral ordinances of Spain, for the government of the mining interest.

* It is affirmed, in the report here quoted, that upward of two thousand metallic veins had been registered in Honduras up to the year 1825.

CHAPTER XI.

PRECIOUS WOODS—VEGETABLE PRODUCTIONS—ANIMALS—
FISHES—REPTILES—INSECTS.

THE precious woods of Honduras rank next only to its minerals in point of value. At present they probably constitute the principal item in the exports of the state. Those best known are the mahogany and rosewood; but the proportion of the former which enters into commerce is much the greatest, and, both in this respect, and as giving employment to a considerable body of the inhabitants of the state, it is entitled to a first consideration.

And here it may be observed that the mahogany-tree of Honduras (*Swietenia Mahagoni*), in respect of its vast size and magnificent foliage, is entitled to be called “King of the Forest.” In comparison with it, all other trees dwindle into insignificance. The enormous size and height of the trunk, the vast spread of its branches, and the space of ground occupied by its roots, are equally remarkable. It is of exceedingly slow growth, hardly undergoing a perceptible increase of size in the narrow span of man’s life. It has been calculated that it requires three hundred years wherein to attain a growth proper for cutting. Some idea may be formed of the great size which it sometimes attains from the fact that the lower section of a tree, seventeen feet long, has been known to measure “in the square” five feet six inches, equal to five hundred and fifty cubic feet, and a weight of seventeen tons!

The mahogany grows in nearly all parts of Honduras, in the valleys of the various streams. It is, however, most abundant upon the low grounds which border the rivers flowing into the Bay of Honduras, where it also attains its greatest size and beauty, and where the mahogany-works, called "cortes" (cuttings) by the Spaniards, are chiefly confined. As these lands are for the most part the property of the state, the wood is cut under licenses obtained from the government, which exacts a fixed sum for each tree. Except those made at the mouths of the various rivers for receiving, marking, and shipping the wood as it is floated down, the mahogany establishments are necessarily temporary, and changed from time to time as trees become scarce in their neighborhood.

Of all occupations known to man, that of the mahogany-cutter is perhaps the wildest in its nature, and yet among the most systematic in its arrangements. When the cutter has fixed upon the valley of some river as the field of his operations, he makes a *dépôt* for storing provisions, and for securing and embarking the wood. Here he maintains a little fleet of *pitpans* for carrying supplies and keeping up relations with the "works" proper, the sites of which are determined chiefly by the abundance of trees, their accessibility, and the means that exist for feeding the cattle which it is necessary to use in "trucking" the wood. To these points it is often necessary to drive the oxen through thick and untracked forests, and to carry the chains and trucks, by means of small boats, against strong currents, or over shallows and rapids, which are only surmounted with infinite labor.

The site once definitively fixed upon, the next step is to erect temporary dwellings for the men: a task of

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no great difficulty, as the only requisite is protection from the sun and rains, which is effected by a roof thatched with long grass from the swamps, or with "cahoon" leaves, or the branches of the thatch-palm. A hammock swung between two posts, two stones to support his kettle, and the hut of the cutter is both finished and furnished!

The mahogany season, which lasts some months, commences in August of each year, it being the opinion of cutters that the wood is not then so apt to split in falling, nor so likely to "check" in seasoning, as when cut from April to August, in what is called "the spring." Furthermore, by commencing at this period, the cutter is enabled to get down his wood, and prepare it for trucking by the setting in of the dry season.

The laborers are divided into gangs or companies of from twenty to fifty each, under the direction of a leader styled "a captain," who directs the men in his company, assigns them their daily tasks, and adds to or deducts from their wages in proportion as they accomplish more or less than what is supposed to be a just day's work. Each gang has also one person connected with it, who is called a hunter, whose duty it is to search the "bush" for trees proper to be cut. His work, therefore, commences somewhat earlier than that of the others, and, as it involves activity and intelligence, he is paid much higher wages than the mere cutters. His first movement is to cut his way through the thickest of the woods to some elevated situation, where he climbs the tallest trees he finds, from which he minutely surveys the surrounding country.

"At this season of the year (August), the leaves of the mahogany-tree are invariably of a yellow-reddish hue, and an eye accustomed to this kind of exercise can, at a great distance, dis-

cern the places where the wood is most abundant. He now descends, and to such places his steps are at once directed, and, without compass or other guide than what observation has imprinted on his recollection, he never fails to reach the exact spot at which he aims. On some occasions, no ordinary stratagem is necessary to be resorted to by the huntsman to prevent others from availing themselves of the advantage of his discoveries; for, if his steps be traced by those who may be engaged in the same pursuit, which is a very common thing, all his ingenuity must be exerted to beguile them from the true track. In this, however, he is not always successful, being followed by those who are entirely aware of all the arts he may use, and whose eyes are so quick that the slightest turn of a leaf or the faintest impression of the foot is unerringly perceived; even the dried leaves which may be strewed upon the ground often help to conduct to the secret spot; and it consequently happens that persons so engaged must frequently undergo the disappointment of finding an advantage they had promised to themselves seized on by others. The hidden treasure being, however, discovered, the next operation is the felling of a sufficient number of trees to employ the gang during the season.

“The tree is commonly cut about ten or twelve feet from the ground, a stage being erected for the axe-man employed in leveling it; this, to an observer, would appear a labor of much danger, but an accident rarely happens to the people engaged in it. The trunk of the tree, from the dimensions of the wood it furnishes, is deemed most valuable; but, for purposes of an ornamental kind, the limbs or branches are generally preferred, their grain being much closer, and the veins richer and more variegated.”

A sufficient number of trees being cut, the preparations for “trucking” commence by the opening of roads from the places where they lie to the nearest river. The distance of road to be cut depends on the situation of the trees. When they are much dispersed, miles of roads and many bridges are required. A firm and well-graded main road is first built, from whence radiate

numerous wing-roads. These are all built by task-work, and the principal amount of the labor of the cutters is expended upon them. The clearing away of the bushes and undergrowth is the work of one set of men, who are expected to clear one hundred yards per day. They are followed by another set, who cut down the larger trees as even with the ground as possible, the task being also one hundred yards per day to each laborer, although this is more difficult and laborious, from the number of hard woods growing here, which, on failure of the axe, are removed by the application of fire. The trunks of these trees, although many of them are valuable for different purposes, such as bullet-tree, iron-wood, redwood, sapodilla, etc., are thrown away as useless, unless they happen to be adjacent to some creek or small river which may intersect the road; in that case they are applied to the constructing of bridges across the same, which are frequently of considerable size, and require great labor to make them of sufficient strength to bear such immense loads as are taken over them.

The roads being finished generally by the month of December, the trees are sawn into logs of various lengths, in order to equalize the loads which the oxen have to draw. This being completed, the logs are separated one from the other, and placed in whatever position will admit of the largest square being formed according to the shape which the end of each log presents, and is then reduced, by means of the axe, from the round or natural form into "the square;" although some of the smaller logs are brought out in "the round," yet, with the larger description, the making them square is essential, not only to lessen their weight, but also to prevent their rolling on the truck or carriage.

“In the months of April and May, all the various preparations having been completed, and the dry season having become sufficiently advanced, the “trucking” commences in earnest. This may be said to be the mahogany-cutters’ harvest, as the result of his season’s work depends upon a continuance of the dry weather, for a single shower of rain would materially injure his roads. The number of trucks worked is proportioned to the strength of the gang, and the distance generally from six to ten miles. We will, for example, take a gang of forty men, capable of working six trucks, each of which requires seven pair of oxen and two drivers, sixteen to cut food for the cattle, and twelve to load or put the logs on the carriages, which latter usually take up a temporary residence somewhere near the main body of the wood, it being too far to go and return each day to the river side, or chief establishment. From the intense heat of the sun, the cattle would be unable to work during its influence; consequently, they are obliged to use the night-time in lieu of the day, the sultry effects of which it becomes requisite to avoid. The loaders, as before mentioned, being now at their stations in the forest, the trucks set off from the *embarcadero* about six o’clock in the evening, and arrive at their different places of loading about eleven or twelve o’clock at night. The loaders, being at this time asleep, are warned of the approach of the trucks by the cracking of the whips carried by the cattle-drivers, which are heard at a considerable distance; they arise, and commence placing the logs on the trucks, which is done by means of a temporary platform laid from the edge of the truck to a sufficient distance upon the ground, so as to make an inclined plane, upon which the log is gradually pushed up from each end alternately. Having completed their work of loading all the trucks, which may be done in three hours, they again retire to rest till about nine o’clock next morning. The drivers now set out on their return, but their progress is considerably retarded by the lading, and, although well provided with torchlight, they are frequently impeded by small stumps that remain in the road, and which would be easily avoided in daylight; they, however, are in general all out at the river by eleven o’clock next morning, when, after throwing the logs into the

river, having previously marked them on each end with the owner's initials, the cattle are fed, the drivers retire to rest until about sunset, when they feed the cattle a second time, and yoke in again.

"Nothing can present a more extraordinary appearance than this process of trucking, or drawing down the mahogany to the river. The six trucks will occupy an extent of road of a quarter of a mile. The great number of oxen, the drivers half naked (clothes being inconvenient from the heat of the weather and clouds of dust), and each bearing a torch-light, the wildness of the forest scenery, the rattling of chains, the sound of the whip echoing through the woods—then all is activity and exertion so ill corresponding with the silent hour of midnight, makes it wear more the appearance of some theatrical exhibition than what it really is, the pursuit of industry which has fallen to the lot of the Honduras wood-cutter.

"About the end of May the periodical rains again commence. The torrents of water discharged from the clouds are so great as to render the roads impassable in the course of a few hours, when all trucking ceases; the cattle are turned into the pasture, and the trucks, gear, and tools, etc., are housed.

"The rain now pours down incessantly till about the middle of June, when the rivers swell to an immense height. The logs then float down a distance of 200 miles, being followed by the gangs in pitpans (a kind of flat-bottomed canoe) to disengage them from the branches of the overhanging trees, until they are stopped by a boom placed in some situation convenient to the mouth of the river.

"Each gang then separates its own cutting by the mark on the ends of the logs, and forms them into large rafts, in which state they are brought down to the wharves of the proprietors, where they are taken out of the water, and undergo a second process of the axe to make the surface smooth. The ends, which frequently get split and rent by the force of the current, are also sawed off, when they are ready for shipping."

The wages paid in Belize by the English cutters on the eastern coast of Yucatan do not vary much from

the prices common in Honduras. A "gang" there is understood to comprehend a "captain" and fifty men, divided into thirty first class, ten second class, and ten third class. The captain receives from \$30 to \$45 per month, and the men \$15, \$12, and \$10, according to their rank. The hunter for the gang has \$15 per month, or most frequently is paid at from half a dollar to a dollar for each tree he finds, according to its size and value. The men here, as in Honduras, are supplied with tools and rations, and receive their pay in the same relative proportion of goods and money.

Around Belize the mahogany-cutters are chiefly negroes, descendants of the slaves who were formerly employed there. But in Honduras they are principally Caribs, who in activity and strength are said to excel the negroes; they are also more intelligent, and require less care and superintendence. Many of them go annually to Belize, and hire themselves for the season, returning to their homes at its close.

In reference to the mahogany trade of Honduras, as, indeed, in respect to every other branch of industry and commerce, we are absolutely without information both as to its amount and value. It may nevertheless be regarded as steadily increasing, and as promising to become every year more important as the supplies of wood from the islands and from the peninsula of Yucatan diminish, and as the demand for it in the markets of the world is augmented. The principal establishments are now on the River Ulua and its branches, and on the Aguan, Black, and Patuca rivers. The other streams have been neglected, in consequence of the difficulty of floating down the wood, as well as of embarking it on an unprotected shore.

Besides the mahogany, Honduras supplies nearly ev-

ery other variety of wood common to the tropics, all of which are too well known to need more than an enumeration. Rosewood (*Amyris Balsamifera*, L.) is common on the northern coast, where it is beginning to become an article of commerce. Lignumvitæ (*Rhamnus Sarcomphalus*, L.) abounds in the valley of the Ulua, and on the banks of the rivers in the plain of Comayagua, and, no doubt, is common in all other parts of the state.

Among the numerous dyewoods, or trees producing dyes, for which Honduras is famed, may be enumerated the Fustic (*Morus Tinctoria*, L.); Yellow Sanders (*Santalum*); Brazil-wood (*Cæsalpina Echinata*, L.); Dragon's-blood-tree (*Pterocarpus Draco*, L.); Nicaragua-wood (a variety of Brazil-wood); and the Anotta (*Bixa Orellana*).

Trees producing gums and medicines are not less numerous. The Gum Arabic bush (*Acacia Arabica*) abounds on all the open savannas on the Pacific slope. And in the forests may be found the Copaiba-tree (*Copaifera Officinalis*, L.); the Copal-tree (*Hedwigia Balsamifera*); Liquid Amber (*Styrax Officinalis*); Palma Christi (*Ricinus Communis*); Ipecacuanha, and, finally, the *Ule*, Caoutchouc or India-rubber (*Siphonia Elastica*). The latter is abundant in the low lands of both coasts. Small quantities are collected for sale by the Caribs on the Bay of Honduras, but it has as yet received very little attention.

Among the common and most useful woods, the long-leaved or pitch pine deserves the first mention, not less on account of its excellent quality than its great abundance. It may almost be said to cover all the more elevated portions of Honduras, from one sea to the other. Upon the Pacific slope of the continent it

makes its appearance on the hills and mountains at the height of about 1200 feet above the sea. Toward the interior it is found at lower elevations, and on the Atlantic declivity it is abundant nearly down to the sea level. I found it on the low hills bordering the great plain of Sula, on the west, at the height of 250 feet; and it is well known that on the savannas bordering the rivers and lagoons to the eastward of Truxillo, as well as on the Mosquito Shore, it is a characteristic feature. The trees do not grow closely together, but stand well apart, permitting the mountain grasses to grow beneath and around them, so that a pine forest in the interior more resembles a well-kept park than the thickets to which we are accustomed to give the name of forest. The trees grow frequently to great size, but average about twenty inches in diameter. They are rich in pitch, and the wood is firm, heavy, and durable, and the heart is never attacked by insects. It furnishes, therefore, a cheap and convenient timber for all kinds of constructions in the country, as well for bridges as for buildings and for boats. Captain Henderson observes of the Honduras pine: "The timber which it furnishes can scarcely be exceeded in size, and is generally considered, for every necessary purpose, greatly superior to what can be imported from the United States;" and Strangeways expresses the conviction that the endless tracts of pine forest on the northern coast will ultimately come to furnish a large supply both of pitch, tar, and timber for the wants of commerce.

The *Cedro*, or cedar (*Cedrela Odorata*, L.), ranks next to the pine in the list of common and useful woods. It is found in all the valleys, but more particularly in those of the principal rivers near the coasts. It attains

the height of seventy or eighty feet, and a diameter of from four to seven feet. It is not attacked by insects, is light and easily worked, as well as ornamental in color and agreeable in smell. For these reasons, it is more extensively used than any other wood in Honduras. It is now exported in small, but increasing quantities. Most of the canoes and *pitpans* of the natives are hollowed from the trunks of the *cedro*, and are both light and durable, but liable to be split in beaching.

The *Ceiba*, or silk-cotton-tree (*Bombax Ceiba*, L.), is abundant, and distinguished for its vast size, which leads to its common use for "*bongos*" and "*pitpans*." I have seen boats, hollowed from a single trunk, which would measure seven feet "in the clear" between the sides. This tree blossoms two or three times a year, when its carnation flowers give a bloom to an entire forest. It produces a pod containing a kind of downy fibre or cotton, which is sometimes used to stuff cushions and pillows, and may possibly be made useful for other purposes.

In addition to these woods, all of those enumerated below are more or less abundant, and fitted for use, viz.: Live-oak (*Bignonia*); Santa Maria; Sumwood; Sapodillo (*Achras Sapota*); Mangrove (*Rizophora Mangle*); Mangrove Grape-tree (*Coccoloba Uvifera*); Iron-wood (*Syderoxylum*); Calabash (*Crescentia*); Button-wood or Mangle Saragoza; Mohoe (*Althæa rupestris*); Locust (*Hymenæa Courbaril*); Pole-wood; Almond or *Almendrillo*; various kinds of Oak; Grana-dillo (*Brya Ebanus*); many varieties of Palms; Zapote (*Sapote Mammosa*), etc., etc.

Apart from the lime, lemon, orange, and palm trees, there is a great variety of trees bearing fruits which are indigenous in the country. The cacao is one of

these, and is remarkably abundant on the northern alluvions, where the natives draw their entire supplies from the forests. It is known there as the *Cacao Mico*, monkey or wild cacao, and is distinguished from the cultivated variety by having larger nuts, and, it is claimed, a finer flavor. The pimienta-tree, closely resembling the Jamaica "allspice" (*Myrtus Pimenta*), is also indigenous. Its berry is somewhat larger than the variety found in the islands, but weaker in its aroma, and has not yet entered into the commerce of the country.

The Anona, of several varieties, is also indigenous; the Aguacate, or Alligator Pear (*Persea Gratissima*); Citron (*Citrus Tuberosa*); Tamarind (*Tamarindus Occidentalis*); Guava (*Psidium Guajavas*); Pines (*Bromelia Ananas*); Mango (*Mangofera Domestica*); Papaya (*Carica Papaya*); Zapote; Granado (*Punica Granatum*); Mamay (*Lucuma Bomplandi*); Nance; Jocote, or wild Plum; Manzanilla, etc., etc.

The sarsaparilla (*Smilax Medicinal*) is probably produced nowhere in the world of better quality or in greater abundance than in Honduras, but more particularly on its northern and eastern coasts. It is wholly collected by the Indians, but never in greater quantities than may be necessary to procure, by exchange, such articles of European manufacture as they may happen to require. It might be systematically obtained in quantities to meet every demand of commerce.

The vanilla (*Epidendrum Vanilla*) occurs in the same district with the sarsaparilla, and is remarkable for its luxuriance and the size of its pods. It has not yet become an article of export, but the specimens which have been sent to the United States and Europe have already elicited orders beyond the capacity of the available labor of the coast to supply.

The *Pita*, called in Mexico *Ixtle*, is a variety of the agave, very prolific, and yielding fibres varying in quality from the coarsest hemp to the finest flax. It is used for the manufacture of thread, cordage, hammocks, paper, etc., and, being hardy and easily cultivated, may be made an important article of export as well as of domestic use.

I have already said that Honduras produces freely all the great staples of the tropics. The lands upon both coasts are well adapted for cotton, which, however, is not now produced, except in small quantities at a few points by the Indians, for their own peculiar manufactures. The experiments which have been made in the production of this staple, both in San Salvador and Nicaragua, have been in every way satisfactory, so far as the quality of the article itself is concerned; but the difficulty of procuring skilled, and, above all, steady labor, proved insuperable, and led to the abandonment of the projected plantations. Nevertheless, during one year, fifty thousand bales of three hundred pounds each were exported from the western ports of Nicaragua. According to Mr. Baily, "it took a high standard in the Manchester market," where it would always have commanded a ready sale.

The sugar-cane of Honduras, as indeed of all Central America, is indigenous, and widely different from the Asiatic variety cultivated in the West Indies and the United States, being softer and slenderer, and containing a proportionately greater quantity of stronger juice. It grows luxuriantly, alike on the plains and among the mountains, at elevations of between three thousand and four thousand feet. Two crops, and, under very favorable circumstances, three crops a year are taken annually, and the cane does not require replant-

ing but once in ten or twelve years. The crystals of the sugar produced from this cane are large and hard, and, with care in the manufacture, nearly as white as the refined sugar of commerce. There are no extensive establishments for its production, but innumerable little *trapiches*, or mills, driven generally by oxen, are scattered all over the state, to supply the local wants of the people. The greater part of the supply for ordinary consumption is in the form of "*chancaca*," or crude sugar, made into cakes of about two pounds each, and wrapped in plantain-leaves. In this form it is eaten with the native *tortillas*, and constitutes an article of daily food among the lower classes.

Coffee of excellent quality flourishes freely in Honduras, although it has never been adopted as an article of general production, not even to the extent of supplying the consumption of the state. I saw neglected patches at various places in the Department of Gracias, in all of which the bushes were heavily laden with the berries. In Costa Rica the cultivation of coffee has been introduced with the best success. In 1851, the product of that little state was upward of 20,000,000 lbs., bringing in the English market an average price of \$12 50 per cwt., equal to \$2,500,000 in value. There is every reason for believing that coffee of equally good quality with that of Costa Rica may be produced in Honduras, which has every requisite variety of soil and climate.

Cochineal seems to have been anciently cultivated, to a small extent, in Honduras, but the production is now entirely confined to Guatemala, of which state it constitutes the chief staple. The *Nopal* is abundant and indigenous in the plain of Comayagua, where its leaves are silvered with the webs of the *Cochineal Silvestre*, or wild cochineal.

The tobacco of Honduras has a deserved celebrity throughout Central America; that of the Llanos de Sta. Rosa, Department of Gracias, is regarded as second to none in the world. It was, in fact, the discovery of the peculiar advantages of that locality for the cultivation of this staple which led to the foundation of the flourishing city of Sta. Rosa, which is now the most important place in the department, completely overshadowing the ancient city of Gracias. The cultivation of tobacco was commenced on the plains of Sta. Rosa near the close of the last century, and increased so rapidly that, in 1795, a royal factory was established there, and a factor appointed by the crown. From this time the tobacco produced here grew in importance and reputation, until it came to be sent not only throughout the old kingdom of Guatemala, but to Mexico, Peru, and even to Spain itself. The population of Sta. Rosa increased in proportion, and in 1823 the Constituent Assembly gave it the name of Villa. The political convulsions which have agitated the country since have been severely felt at Sta. Rosa, in the falling off in the production of its great staple, and in a corresponding decrease in population; still, the amount annually produced is considerable, of which a large part is exported to Cuba, where it is manufactured and sold as the production of that island. The plains of Olancho, as also the valley of Sonaguera, are said to produce a superior quality of tobacco. Some of the tobacco of Honduras finds its way to the other states, and considerable quantities have been exported from the Pacific ports to Hamburg and other ports of Germany. The attempts which have been made to export cigars have not been successful, chiefly from deficiency of skill in the preparation and manufacture of

the tobacco. With increased experience and knowledge in these respects, there is no doubt that tobacco will become a principal article of production and commerce.

Indigo is not produced to any large extent in Honduras. Its cultivation has nevertheless been recently introduced in the valley of the Chamelicon, Department of Gracias, with the most satisfactory results. The quality of the article is found to equal that of Nicaragua and San Salvador, which is regarded as superior to the indigo of India. There is every reason to believe that the production might be extended with ease and profit throughout the valley of the Chamelicon, and the valleys of the other streams falling into the Bay of Honduras.

Maize flourishes luxuriantly, and two crops a year may be raised on the same ground wherever the soil is sufficiently moist, or may be made so by irrigation. In the interior, among the mountains, it is not customary to plant the fields a second time in the course of the year, except for the purpose of growing the stalks, to be cut down as *sacate* or fodder for cattle. The variety of maize in general use more resembles that of New England than of the Mississippi Valley. The grain is remarkably full and hard, and the ears relatively small, but numerous. Here, as in nearly every part of tropical America, maize is essentially the "staff of life;" and, made into *tortillas*, *tamales*, *atole*, *tiste*, and other forms of food, constitutes the chief support of the people. It is generally cheap, but occasionally suffers from the *chapulin* or *langosta*, a species of locust or flying grasshopper, which comes in such clouds as completely to destroy the largest *milpa* in the course of a few hours. As the pest of *langosta* is usually general, the visitation sometimes results in a great scarcity, border-

ing on famine; in which cases maize advances to as high as four and five, and even ten dollars per bushel. Fortunately, the insect seldom attacks the fields which are planted high up on the slopes of the mountains, where the people make their *milpas* during the periodical visitations of the *chapulin*.

Wheat and the other cereal grains of the temperate zone are produced in all the more elevated districts of Honduras. Little, if any, foreign flour enters the state, and the total consumption may be regarded as supplied at home. I found the wheat-fields in the vicinity of the Indian towns, to the southwest of Camayagua, on the terraces of the mountains, at an elevation of four thousand feet above the sea; but this grain will grow at lower altitudes. The stalk is short but firm, and the grain not so plump as that produced in northern latitudes. This may be the result of the poor quality of the variety in use, and to the circumstance that the seed is never changed. The flour is white and well-flavored, and in all respects equal to that produced in Chili and the United States.

Rice is largely used, particularly near the coasts, where it is produced with little labor and of the best quality.

Potatoes, as I have said, are cultivated to a limited extent on the higher plateaus of the mountains, but chiefly by the Indians, who carry them to the large towns, to which their consumption is chiefly confined. Elsewhere, and in all parts of the state, the *yam* and the *manioc* or *cassava* are abundant, and in general use. The yams produced near Omoa, Puerto Caballos, and Truxillo are remarkable alike for their excellent quality and great size, a single root sometimes weighing from fifty to sixty pounds! In conjunction with

plantains, bananas, and the varieties of beans, which, under the denomination of *frijoles*, are of universal use, these constitute the principal vegetable supplies of the country. The plantain is wonderfully luxuriant on the northern coast. Next to the maize, or perhaps deserving the first place, it is the principal reliance of the people of the tropics as an article of food. It is easily propagated, and requires but little care after planting. Its yield is enormous, and from a single acre it is estimated by Humboldt to equal the crop of one hundred and thirty-three acres of wheat, and of forty-four acres of potatoes! It must therefore enter as an important element in all calculations on the subject of provisioning the laborers who may be engaged in the construction of the proposed public works in Honduras.

The fauna of Central America corresponds with its intermediate geographical position, partaking of the character of that of the equatorial regions of South America upon the one hand, and the semi-tropical districts of Mexico on the other. Thus we find several varieties of the ant-eater, corresponding with those of the valley of the Orinoco, on the northern and eastern coasts of Honduras, while the gray squirrel of our latitudes greets us with his familiar bark among the forests of the interior.

Among domestic animals, we find the horse, the ass, the ox, sheep, goats, hogs, dogs, and cats, all of foreign origin except one variety of the dog, which is indigenous.

The Horse is found in all parts of Central America, although not used, except at a few of the ports, for purposes of draught. The savannas afford him an abundance of pasturage, and sustain him in good con-

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dition. Over these he roves in nearly a wild state, and is seldom caught except with the aid of the lasso. Introduced by the Spaniards, he retains many of the peculiarities of the Arab stock. He is small, of good build, firm in the joints, and distinguished for the extreme smallness and beauty of his ears. He suffers much from insects, which frequently enter the ears, causing them to lop, and otherwise disfiguring the animal. He is also often attacked by bats (*vampiros*), and by a species of spider (*araña*), which attacks the feet, and causes the hoof to separate.

The Ox finds ample pasturage and congenial roving ground in the vast savannas and open forests of Honduras. With the horse, he gives evidence of his Spanish origin. He grows above what in this country is regarded as average size, is of great beauty and strength of form, powerful neck, short head, and compact, but relatively short limbs. He suffers much less than the horse from insects, and nearly always looks smooth and sleek. The cows do not yield a large quantity of milk, but it is of good quality. Vast herds of cattle are raised in various districts of the state, and constitute a principal part of the property of the people. Large numbers of oxen, broken to the yoke, are supplied to the mahogany-works on the coast and at Belize at from ten to fifteen dollars the pair. Ordinary cows sell at from four to five dollars.

The Hog is smaller than the European varieties, almost black in color, with thin bristles, long snout, short legs, and stout body. He is sometimes kept up and fattened, but is generally allowed to run at large and find his own food. The Chinese or East Indian variety has been successfully introduced by some enterprising citizens of Sta. Rosa, Department of Gracias.

Goats are not numerous, but breed rapidly, keep in good condition, and might be introduced to any desirable extent, especially in the more elevated districts. Since, from the abundance of cattle, they are not required for food, they exist in the country rather as domestic pets than for economic purposes.

Sheep are found in greater or less numbers, but are only raised systematically in Quesaltenango and the other departments of Guatemala, constituting what are called *Los Altos*, the Highlands, where their wool is extensively manufactured by the natives in a variety of thick cloth, much prized throughout all Central America. The wool seems to be long and coarse, and the flesh is but little used for food. There is good reason to believe that this animal might be introduced successfully in all of the elevated districts of Honduras.

The Ass is nowhere used for burden, and is kept simply for the purpose of crossing with the horse, and for the production of mules. The latter are in universal use, and are highly valued. They are chiefly raised in the mountain districts, and afterward transferred to the plains. Great pains have been taken to produce fine breeds, and with considerable success. Taken generally, they are rather small in size, but hardy to a wonderful degree. Some of large size, and well broken, command high prices, ranging from \$70 to \$300. The prices of ordinary cargo mules vary from \$15 to \$35. They are not shod, except in parts of Guatemala, but their hoofs are hardened by the application of hot lime-juice. Eight *arobas* (200 lbs.) constitute an ordinary load for a pack-mule in Honduras, while ten, and even twelve *arobas* are regarded as a cargo in the level districts of Nicaragua and San Salvador.

Among wild animals, Wright, in his Memoirs on the

Mosquito Shore, quoted by Strangeways, mentions the *buffalo*, but he probably mistook the *cimarrones*, or wild cattle of the coast, for the bison.

The Deer (*Cervus Mexicanus* and *Cervus Rufus*) is abundant in the woods and savannas. The variety first named resembles the European deer in color, but is somewhat less in size, and provided with large antlers. The second is more numerous, of lighter and browner tint, with short, smooth-pointed horns of, at most, two indentations. The young of this variety is very pale in color, almost white, and is highly valued for food. Captain Henderson may have confounded this variety with the antelope, which, he affirms, is found in Honduras. He says, "If this animal, which in this country is known by no other name than that of antelope, be not such in fact, it is difficult to designate to what class it should belong. The resemblance, so far as description can be relied on, is in every respect essentially the same." It is described as about half the size of the fallow deer, short tail, knees furnished with tufts of hair, body reddish brown, under part of buttocks white, horns about twelve inches long, and bent in the form of a lyre. It is said to go in large flocks.

The Peccary (*Sus Tajassu*, L.) is common in Honduras, in the valleys of the rivers, and in the neighborhood of the coasts.

The Waree (*Sus Americensis*) is also found in large droves in portions of Honduras, Nicaragua, and Costa Rica. Henderson supposes it to be the ordinary hog run wild.

The Tapir, or mountain-cow (*Tapir Americanus*, L.), is found upon the northern and southern coasts, but rarely in the interior country. It is sometimes partially tamed.

The Manatus, or Sea-cow (*Manatus Americanus*, L.), is found in all the creeks and lagoons of the northern coast. I have never heard of its existence on the side of the Pacific. It is well known to belong to the mammalia. It grows to the length of ten feet, and attains a weight of from seven hundred to one thousand pounds. The Caribs of the coast hunt it for the sake of its flesh, skin, and fat. It is taken with the harpoon, and its capture requires a great deal of judgment and skill.

Monkeys (*Simia*) are numerous, and of many varieties, including those known as the horned (*Simia Fatuellus*, L.), brown (*S. Apella*), and capuchin (*S. Capuchina*). The last-named variety is abundant, and is a very playful little animal. There is another variety, mentioned by Captain Henderson, which is common in Honduras, and which he thinks has escaped particular notice. "In form and size it resembles the *Apella*; and the female, in which the characteristic difference appears most strongly to exist, is particularly denoted by a loose, fleshy, appendant membrane, which frequently occasions its sex to be mistaken."*

The Raccoon (*Procyon Lotor* or *Ursus Lotor*, L.), is common, of medium size, living chiefly upon animal food, and is of thieving propensities. Individuals frequently live apart, and are called "*Pisotes solos*" by the Spaniards. These grow very fat, and of extraordinary size.

The Opossum (*Didelphys Opossum*) attains a length of ten inches, color gray, powerful head, long and very flexible tail, and the feet provided with sharp claws. The female has a cavity or sack in the belly for the reception of her undeveloped young. When they leave

* Henderson's Honduras, p. 130.

it they are generally carried on the back of the mother. Food, small birds, lizards, etc.

The Squirrel. There are two kinds of squirrels found in Honduras, the gray (*Sciurus Cinereus*, L.), and the small red squirrel (*S. Guajanensis*).

The Ant-eater is also found of several varieties, known as the striped ant-eater (*Myrmecophaga Pentadactyla*), and the little ant-eater (*M. Didactyla*). Among the other lesser animals may be enumerated the Quash (*Viverra Quasje*), which resembles the ichneumon, fetid in smell, with powerful lacerating teeth.

The Armadillo of three bands (*Dasypus Tricinctus*, L.), the eight-banded (*D. Octocinctus*), and the nine-banded (*D. Novencinctus*). The Gibeonite (*Cavia Paca* or *Mus Paca*, L.) is most plentiful, and is easily domesticated. It grows to the length of two feet, thick and clumsy in form, and of a dusky brown color, with four longitudinal series of spots on each side of the body. Its flesh is extolled as a great delicacy. The Indian Coney, or Rabbit (*Cavia Aguti*) is similar to the Gibeonite, and is about the size of the ordinary hare. It does not run, but leaps; is easily tamed, and largely hunted by the Indians for food and for its skin, which is of a durable quality. It swarms in the islands belonging to Honduras, in the bay of the same name.

Among the ferine animals found in Honduras is the Jaguar (*Felis Onca*, L.). It is of a bright tawny color, upper part of head striped with black, sides beautifully variegated with irregular black spots, breast and belly of a whitish color, seldom attacks men, and inhabits places almost inaccessible to human feet. Besides the jaguar we occasionally find also the Black Tiger (*Felis Discolor*), which is much the fiercest animal of Honduras. It grows of large size, and is remarkable for

its strength. It often kills full-grown cattle, dragging them far in the woods; and it does not hesitate, if irritated, to attack men. The Ocelot, or Tiger-cat (*F. Pardalis*) resembles the common cat, but is much larger. It is timid, and seldom ventures from its hiding-places. It is valued for its skin. The Cougar, or Puma (*F. Concolor*) is also abundant, and is slender and graceful in form. It is usually called *Leon* (lion) by the natives. It is neither as powerful nor as fierce as the ounce or jaguar, and flies from the face of man. The *Coyote*, or indigenous wolf, is not uncommon.

The interior of Honduras is rather deficient in birds, but they abound on the coasts and in the valleys of the principal rivers. The most celebrated is the *Quetzal*, which was the imperial bird of the Quichés. It is best known in the museums as the *Trogon Resplendens*, and is found only in the Mountains of Merendon, in Honduras, and the Department of Quezaltenango, in Guatemala. The Parrot abounds every where, of numerous varieties, and of the most vivid colors. The *Guacamaya*, or Macaw, red and blue, are numerous on both coasts, as is also the Toucan. The Yellow-tail (*Cassicus Montezuma*) soon becomes familiar to all voyagers on the rivers of Honduras. It is remarkable not less for its bright colors than its pendent nests, of which forty or fifty sometimes hang from the branches of a single tree.

Among the *Raptores*, or birds of prey, are a variety of Hawks, Vultures (including the common Buzzard or *Zopilote*), Owls and Sea-eagles. The Crow, Blackbird, Mexican Jay, Rice-bird, Swallow, Rain-bird, Humming-bird (of numerous varieties), are also common. Of water-birds, the Pelican, Muscovy Duck, Black Duck, Curlew, Plover, Spoonbill, Teal, Darters, Herons, Ibises,

Cranes, etc., are all found abundantly on the shores of the lagoons and rivers. The Wild Turkey, Curassow, Quam (*Penelope Cristana*), *Chachalaca*, or indigenous hen, Mexican Partridge, Quail (in abundance), Snipe, and several varieties of Wood Pigeons and Doves, are most numerous in the interior country.

The Alligator is found in all the lagoons and rivers on both coasts. It attains the size of fifteen feet in length. It avoids the neighborhood of man, and generally abandons the streams as their banks become inhabited. Of the Lizard tribe there are infinite varieties. The most remarkable is the Iguana, which sometimes attains three and four feet in length. It is bluish gray in color, and lives almost exclusively on the blossoms of trees. Its bite is painful, but not dangerous. The flesh is delicate and much valued.

Serpents of several kinds are found both in Honduras and San Salvador, but they are chiefly confined to the coasts. The common practice of burning the dry grass and withered vegetation of the interior during the dry season has almost had the effect of annihilating this species of reptile. During a year spent in the state, and almost constantly occupied in the field, I do not remember to have seen more than four serpents, and only one of these (a *corral*) of a poisonous character. As we approach the coast, however, they become more numerous, but they are generally of harmless varieties. In respect to serpents of the coast, Messrs. Müller and Hesse observe :

“For the most part they are harmless, and they are seen by the natives in their houses rather with pleasure than alarm or disgust, since they are useful in the destruction of vermin. The harmless snakes have generally rounded spots on the head, angular marks under the tail and belly, while the body is covered

with oval scales. The upper jaw, as in mammalia, is set for its entire length with sharp, wedge-shaped, solid teeth, and from the junction of the jaws springs another row. The under jaw is furnished in the same manner, so that, in opening the mouth, four rows of teeth are seen. The harmless snakes are, in general, long and slender in body, the head is handsomer, and the scales are smother. In our journeys through the forests we observed several of these, and especially one large kind of bluish-white color, which we were unable to catch, as it disappeared rapidly when we approached it. This kind is named by the Indians *woulah*, and they say that, though it steals fowls, it destroys the smaller varieties of poisonous snakes. The venomous serpents are distinguished by a thicker body and shorter tail, a broad head covered with scales, and more especially by the poison-fangs, which are sharp, provided with a channel and an opening at the upper end, not at the top but at the side, for the exit of the poison. Behind these fangs lie several smaller teeth, but they are concealed in a fold of muscle. As we had no opportunity to see or investigate any such specimens, although the Indians, in hopes of reward, hunted several times in vain for us, we must content ourselves with repeating the ordinary names in use there. There is the golden snake, the whip-snake, tamagas, and barber's pole. The two latter are the most dangerous, and their bite destroys life. According to experience, the root of the guaco is a reliable remedy for the bite of a snake. It is found almost every where, especially on the island of Roatan. The number of serpents is perceptibly diminished by the advance of cultivation."

In addition to the snakes mentioned in this extract may be enumerated the rattlesnake, the ordinary black-snake, and the *corral*, the last ranking with the *tamagasa* in the deadly nature of its bite. It is of the most brilliant colors, covered with alternate rings of green, black, and red. It does not grow of large size, nor is it common.

The Tortoise and Turtle are every where numerous,

and of several kinds. The land turtle, chiefly of the species *Tubulata*, attains a foot in length. It has a dark shell, and is eaten in common with the sea tortoise, but is not regarded as of so good quality. The rivers abound in a species of turtle generally called *Hicatee*. It is smaller than the sea turtle, but inferior in no other respect. It attains a length of eighteen or twenty inches, and is remarkable for the depth of its shell. The varieties of sea turtle familiarly known as green turtle (*Chelonia Midas*) and hawk's-bill turtle (*C. Carretta*) are abundant on both coasts, and furnish a large supply of food, and a principal source of wealth to the Indians. From the variety known as hawk's-bill is taken the best tortoise-shell of commerce. There is still another species, which grows to larger size than either of those already enumerated, called the trunk turtle. Its flesh is not used, nor is its shell of good quality. A kind of oil, which is much valued, is extracted from this turtle, and, it is supposed, might be made a considerable article of trade.

Oysters, of two varieties, are plentiful, viz., what is called the bank oyster, found in beds, and growing in clusters of ten or twelve each, and the small or mangrove oyster, which is generally found attached to the roots of the mangrove-trees which line the shores of all the creeks and lagoons. Both varieties are esteemed for food. Vast beds of the first-named species exist in the Bay of Fonseca (*ante*, p. 98).

Crustacea of various kinds and sizes, from the largest lobster to the smallest crab, are most abundant. In particular, the mangrove crab (*Grapsus Cruentatus*), and the white and black land-crab (*Gecarcinus*), are very numerous in the lagoons and around the mouths of rivers. They constitute a very savory and nourish-

ing food. Every half-rotten tree near the water is inhabited by countless thousands of soldier-crabs, which, at certain times of the year, migrate inland, and afterward return to the sea. Conchs are numerous in all the cays off the northern coast, and especially on those around the islands of Roatan and Guanaja.

Not only do all the lagoons and creeks of the coast abound in endless varieties of fish, but these swarm in all the rivers and lakes of the interior. In the sea may be found the Rock-fish (*Labrax Lineatus*), Hog-fish (*Helops*), King-fish (*Umbrina Alburnus*), Baracouta (*Sphyræna Baracuda*), Parrot-fish (*Tetrodon?*), Grouper (*Serranus*), red and black Snapper (*Coracinus*), Porgie (*Sargus*), Shad (*Alosa*), Gar-fish, Sword-fish, Porpoise, Flounder, etc. In the lagoons, the Jew-fish, Sheep's-head, Snook (*Macrocephalus*), Mud-fish, Mullet, Calapaver (*Mugil*), Mackerel, Drummer, Grunt, Eel, Cat-fish, etc. In the rivers the Mountain Mullet and Cat-fish are most numerous. The Shark abounds on both coasts.

A species of vine (*Sapindus Saponaria*) grows abundantly in the river valleys, which is often used by the natives for poisoning, or, rather, stupefying the fish of the streams. It is pounded, infused in water, and then poured in the stream, causing the fish to rise helplessly to the surface, when they are easily taken by hand. If allowed to remain in the water, they soon recover from the effects of the intoxication.

Honey-bees exist in Honduras of several varieties. One (*Apis Pallida*) is small, light-colored, and stingless. There is another species, found in the mountain districts, which is indistinguishable from the common honey-bee of the United States. The honey is largely used by the natives, who draw a principal part of the

wax used in the ceremonies of the Roman Church from the natural bee-hives of the forests.

The absence of mosquitoes throughout Honduras and San Salvador generally is worthy of remark, since it is commonly supposed that this insect is one of the principal pests of the country. It is almost unknown in the interior districts, and only found at a few points on the coasts. Their almost total absence around the Bay of Fonseca is one of the best evidences of the absence of pestilential marshes and lagoons in its vicinity. The flea is common every where, and a source of infinite annoyance. The *agarrapata*, or wood-tick, is abundant on the low grounds, and particularly in sections frequented by herds of cattle. They are readily removed from the person by balls of soft wax, which every traveler carries for that purpose. The *chigoe*, *ni-gua*, or *jigger*, a small black flea, which attacks the feet and burrows under the skin, causing irritating sores, is scarcely known upon the Pacific coast. It is nevertheless found upon the northern coast, but rarely attacks persons who preserve proper cleanliness of person. Among spiders the tarantula may be enumerated, but it is not often seen. A species called *araña de cavallo* I have already mentioned as sometimes attacking the feet of horses. Among beetles, the elephant beetle is remarkable for its size. At night the neighborhood of the coasts is sprinkled with fire-fly stars of great brilliance and beauty. Scorpions are found every where, in greater or less abundance; but it is only the sting of the *alacran del monte*, wild, or forest scorpion, which is to be greatly dreaded. The house scorpion is largest, but pale in color, and its sting is far less virulent, corresponding nearly with that of the common wasp. The centipede (*Scolopendra Morsi-*

tans) attains, on the north coast, a length of six or seven inches. Its head bears a pair of strong nippers, and it moves upon twenty divisions of the body, to each of which are attached two feet. It is often found in dwelling-houses, but is not to be feared.

The insect, however, which is most dreaded in Honduras, as indeed in all Central America, is the *Langosta* or *Chapulín*, a species of grasshopper or locust, which at intervals afflicts the entire country, passing from one end to the other in vast columns of many millions, literally darkening the air, and destroying every green thing in their course. I once rode through one of these columns which was fully ten miles in width. Not only did the insects cover the ground, rising in clouds on each side of the mule-path as I advanced, but the open pine forest was brown with their myriad bodies, as if the trees had been seared with fire, while the air was filled with them, as it is with falling flakes in a snow-storm. Their course is always from south to north. They make their first appearance as *saltones*, of diminutive size, red bodies, and wingless, when they swarm over the ground like ants. At this time vast numbers of them are killed by the natives, who dig long trenches, two or three feet deep, and drive the *saltones* into them. Unable to leap out, the trench soon becomes half filled with the young insects, when the earth is shoveled back, and they are thus buried and destroyed. They are often driven, in this way, into the rivers and drowned. Various expedients are resorted to by the owners of plantations to prevent the passing columns from alighting. Sulphur is burned in the fields, guns are fired, drums beaten, and every mode of making a noise put in requisition for the purpose. In this mode detached plantations are often

saved. But when the columns once alight, no device can avail to rescue them from speedy desolation. In a single hour, the largest maize-fields are stripped of their leaves, and only the stems are left to indicate that they once existed.

It is said that the *Chapulín* makes its appearance at the end of periods of about fifty years, and that it then prevails for from five to seven years, when it entirely disappears. But its habits have never been studied with care, and I am unprepared to affirm any thing in these respects. Its ordinary size is from two and a half to four inches in length, but it sometimes grows to the length of five inches.

CHAPTER XII.

EXISTING ABORIGINAL INHABITANTS—THE XICAQUES, PAYAS, SAMBOS, AND CARIBS.

I HAVE elsewhere said that the Indian or aboriginal element predominates in the population of Central America. The population of Honduras forms no exception to this remark; and in some districts of the state it is difficult to say if the whites have assimilated most to the Indians in habits of life, or the Indians most to the whites. In the eastern portion of the state, within the district which lies between the Rio Roman and the Cape or Segovia River, an area of not less than 15,000 square miles, the country is almost exclusively occupied by native tribes, known under the general names of Xicaques and Payas. Portions of all these tribes have accepted the Catholic religion, and live in peaceable neighborhood and good understanding with the white inhabitants. The large town of Catacamas, and some other towns of less note in the vicinity of Juticalpa, in Olancho, are exclusively inhabited by Christianized Payas and Xicaque Indians. But, apart from these, there are considerable numbers who live among the mountains, and who conform more closely to their original modes of life. Yet they also are peaceful, and their relationship with the Spaniards is entirely friendly. They bring down sarsaparilla, deer-skins, dragon's-blood, and other articles, including a little gold washed from the sands of the mountain streams, and exchange them for such articles of civil-

ized manufacture as their wants require. They tacitly recognize the authority of the government, which, however, does not interfere with the simple patriarchal system which they keep up for their organization. Occasionally small parties come down to the coast to work in the mahogany establishments. When their engagements are completed, they quickly return to their homes.

At the time of the discovery, these Indians were found to be, in respect of civilization, far below the Quichés, Kachiquels, and Nahuals, who occupied the plateaus of Guatemala, San Salvador, and the western part of Honduras. But they were, at the same time, greatly in advance of the roving fisher-tribes who dwelt on the low shores of the Caribbean, now called the Mosquito Coast. They were at first intractable, and, favored by the physical conditions of their country, for a long time obstinately resisted the attempts of the Spaniards to reduce them to their sway; but subsequently, when the general settlement of the country to the westward had been effected, and the power of the Spaniards came to be better appreciated, a friendly understanding sprung up, which has not been disturbed for many years.

The names Xicaques and Payas may be regarded as general designations. The *Toacas* or *Towkas*, some of whom live on the banks of the Rio Patuca, and the *Secos*, found on Rio Tinto, or Black River, probably belong to the Payas. They are described by Young, who visited them, as having "long black hair hanging over their shoulders, very broad faces, small eyes, with a peculiar expression of sadness and docility, which prepossesses the beholder in their favor."

"They are short," he continues, "but remarkably strong, and

capable of carrying heavy burdens over the rocky passes of their steep mountains without appearing to suffer much fatigue. Their character for faith and honesty stands high; but, like all other savage tribes, they have a great fondness for spirituous liquors. They bring for sale sarsaparilla, cacao, pimiento, *kin-kooras*, several sorts of bread kind, fowls, turkeys, ducks, etc., and receive in return iron pots, knives, *machetes*, powder, shot, beads, and similar articles of use and ornament. * * In character they are mild and inoffensive. They are industrious, and skillful in manufacturing from their wild cotton a sort of cloak called *kinkoora*, which, being dyed according to some device, and the down of birds interwoven in the fabric, has a very pleasing appearance. * * At the present day, the grossest superstitions exist among the Poyers, and their idolatrous feasts are as common as ever; but their savage character has disappeared, for they are now a mild and peaceable race, having tact and ingenuity in their little manufactures which would puzzle a machine-loving European. * * There is another class of Poyer Indians much lower in civilization. They are termed wild Indians, for, like the Arabs, they wander to and fro as they list, making plantations which, in the course of a certain number of moons, they revisit to gather the fruit. They collect honey, vegetable dyes, sarsaparilla, etc., which they sell to their more civilized brethren for hooks, harpoons, lance-heads, knives, and other articles. They have no intercourse with the Sambos on the coast, and it is only because they can not do without such things as I have enumerated that they visit the Poyer villages. * * The Indians living on the banks of the Seco River, and called *Secos*, have much the same character as the Poyers.

“The *Towcas* [*Toacas*, *Thuacos*, or *Juacos*] are remarkable for their industry and inoffensive character. They are generally a finer race of men than either the Poyers or Secos. They speak at all times low and with great ease, and have an air of gentleness and melancholy. They sound the letter *s* in almost every word. They are celebrated for their skill in making *dorys* and *pitpans*. Their principal residence is near the head of Patook (Patuca) River. * * The Towcas, like the other tribes, have a great character for faith and probity, and are equally famed for

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carrying heavy burdens. They are very dexterous in shooting birds on the wing with their bows and arrows, and are well suited for any thing requiring sagacity and endurance. It is astonishing to observe how little value they put on their labor. For instance, they will sell a dory or pitpan for one axe and a machete, or two iron pots, and so on, notwithstanding the immense time which they expend in making them."

Young visited a Poyer or Payas village on one of the tributaries of Black River, of which he has given us the subjoined account. It illustrates the condition and mode of life of these Indians in general.

"The Indian town, to my astonishment, was comprised in one large house of an oval form, about 85 feet in length and 35 feet wide, in which all the natives resided truly in the patriarchal style. Crickeries were erected all around, close to each other, separated by two or three cabbage boards, each family having one of these compartments. At one side of the house a place was divided off, about sixteen feet by ten feet, and hidden from view by green leaves, which were replenished as fast as they faded. In this place the women are kept during their confinement, and, after a few days, they are again able to attend to their multifarious duties. On our entrance, the women were busily occupied, some pounding cassada and Indian corn together, boiling it, and making it into a beverage called oulung; some preparing cassada for bread in the morning; others making tour-nous; others, again, rubbing cacao and squeezing sugar-cane; in truth, the whole body of them were most busily employed, under the management of the chief's wife, the chief, who is called by the English name of officer, being absent. We were looked upon with a quiet sort of wonder, the women merely gazing for a few minutes upon the white men, of whom, perhaps, they had heard much, and then they resumed their pounding, boiling, and beating. The oulung is a beverage not to be despised on a warm day by those who do not mind a particularly sour taste. After the second time of tasting it, I sought it with pleasure. Their bread, too, is sour, but even that I relished. It is made

of pounded cassada into rolls about fifteen or sixteen inches in length, and about the thickness of a man's wrist. It is then wrapped round with several layers of leaves, and slowly barbecued until done. When eaten fresh, it is good, the sour taste being acquired by keeping. The house is thatched in a very neat manner with swallow-tail leaf to about four feet from the ground, so that the rain, however violent, does not trouble them. They are noted for cleanliness. The situation was well chosen, and a few yards from the house, down a steep pass, was a stream of water, forming innumerable cascades as it ran leaping and dashing over the huge blocks of stone with which it abounded. Here, as we sat, our ears drank in delight at the soothing sound of the water, and we beheld with extreme gratification the verdant hills, the rich plumage of birds as they flew by, and heard the chattering monkeys filling the wood with their noise. I observed around the house numerous fowls, a few Muscovy ducks, turkeys, and pigs; and they can, in general, obtain game by a little exertion in hunting. The peccary, which inhabits high and dry places, often falls here before the superior dexterity and cunning of man. Waree are not found on the Poyer Mountains, so that the Indians sometimes form a party, and descend to one of the hunting passes in the Black River, or such places as they are known to frequent. Very few of them have guns; they merely go armed with a lance and bow and arrow, and they rarely return without a noble supply of barbecued meat. After partaking of a couple of fowls, some cassada and plantains, cacao, and boiled cane-juice, prepared for us by these kind people, we betook ourselves to repose. Early in the morning, while in my hammock, an Indian woman timidly touched me, saying 'Englis,' at the same time presenting me with a hot roll of bread, nicely done up in fresh leaves; another soon came to me with a bundle of oulung, and so it continued until I had three or four bundles of oulung, and nine large rolls of bread. In return, I presented them with a little tobacco, some needles, and salt, and gave a clasp knife to the officer's wife. Soon after, I was agreeably surprised by several of the men arriving from the plantations loaded with sugar-cane, plantains, cacao, etc., which we very willingly received in exchange for a few hooks, needles, etc..

On inquiry, I learned that there was another town about fifteen miles off, judging from the rate they travel in an hour, and in the route to the Spanish country. Before our departure, a number of Indians came from the neighboring town, having been apprised of our arrival, bringing sarsaparilla to trade with for Osnaburg; but we not having that, or cloth of any kind, they were compelled to carry their heavy burdens back."

The coast around Carataska Lagoon, and as far to the westward as Brewer's or Brus Lagoon, was for many years occupied by Sambos, corresponding generally in character with those of the Mosquito Shore. But the Caribs, spreading rapidly eastward from Truxillo and Black River, have now nearly displaced them, and driven them to the southward of Cape Gracias á Dios, into what is called the Mosquito Territory.

These Sambos or Mosquitos are a mixed race of negroes and Indians. It seems that early in the seventeenth century a large slaver was driven ashore not far from Cape Gracias. The negroes escaped, and although at first they encountered hostility from the Indians, they finally made peace, and intermixed with them. The buccaneers had their haunts among them during the period of their domination in the Caribbean Sea, and bequeathed to them a code of morality, which subsequent relations with smugglers and traders have not contributed to improve. The negro element was augmented from time to time by runaway slaves (*cimarrones*) from the Spanish settlement, and by the slaves brought from Jamaica by the planters who attempted to establish themselves on the coast during the early part of the last century.

The Sambos were fostered by the royal governors of Jamaica during the wars with Spain as a means of annoyance to the Spaniards, and with the ultimate pur-

pose of obtaining possession of their country. Governor Trelawney, in 1740, procured from some of the chiefs a cession of the entire shore to the British crown, which act was followed up by the appointment of a governor or superintendent, the erection of forts, and other evidences and acts of occupation and sovereignty. The pretensions thus set up were nevertheless formally and fully relinquished by subsequent treaties with Spain, which provided for the destruction of the English forts, and the unqualified abandonment of the shore. Nor were these pretensions renewed so long as Spain retained her power in America. It was not until her dominion was succeeded by the feeble sovereignty of the Spanish American republics that the traditional policy of Great Britain on the Mosquito Shore was revived. Its revival has led to that singular complication which is now familiar to the public as "the Mosquito question."

The relations of the Sambos, first with the buccaneers, and subsequently with the English, by supplying them with fire-arms and other means of aggression, made them formidable to the neighboring Indian tribes. They often left the creeks and lagoons of the shore, and, going up the various rivers, made descents on the Indian towns on their banks, carrying off the inhabitants to be sold as slaves. For many years an active traffic was thus kept up with Jamaica. As a consequence, the Indian towns nearest the coast, and most exposed to these incursions, were either abandoned entirely, or their inhabitants purchased security from attack by annual presents of boats, skins, and other products of their country to the piratical Sambos.

But with the decline and final suppression of the traffic in Indian slaves, the Mosquito Sambos have lost

much of their activity, and have surrendered themselves more and more to their besetting vice of drunkenness, which, operating on constitutions radically tainted and weakened by unrestrained licentiousness, is hastening their utter extinction.

As I have said, the increase and expansion of the Caribs have already driven most of the Sambos, who were established to the northward and westward of Cape Gracias á Dios, into the territory of Nicaragua, southward of the Cape. As the whole Mosquito population does not probably exceed six or seven thousand, it follows that the proportion which remains in Honduras is insignificant. All accounts concur in drawing a wide distinction between the Sambos and Indians proper, which is little to the advantage of the former.

“The difference between the Sambos and Indians,” says Young, “is very striking. The former are of all shades of color, from the copper of the Indian to the dark hue of the negro, their hair being more or less woolly as they approximate to the latter. They are, in general, well proportioned and active, but more capable of undergoing privations than the fatigue of hard labor. * * They ornament their faces by laying on large daubs of red and black paint. * * Their fondness for liquor is excessive, and from this they suffer great calamities, for, having once commenced to drink, they go on till they fall down in a helpless state of intoxication, and lie exposed to the heavy dews or pouring rain. Their bodies are wasted by fearful disorders, which eventually carry them off: this is one cause of the gradual decrease of population. * * They do not appear to have any idea of a Supreme Being, but many who have at various times been at Belize know the meaning of God, and often say, ‘Please God’ so and so; or, if they wish to be implicitly believed, they will gravely say, ‘God swears.’ They have an implicit belief in an Evil Spirit, whom they call Oulasser, and of whom they are in much fear, and after sunset a Sambo will not go out alone, lest

Oulasser should carry him away. They also much dread a water spirit, whom they call Lewire. * * The men are naturally apathetic and indolent when not excited by liquor, hunting, or fishing, and, as they have no notions of morality to hinder them from indulging their desires, we need not wonder that chastity is not considered a virtue. Polygamy is common among them. * * Their children are often interesting, and the nearer the child is in blood to the Indians, the handsomer and clearer becomes the skin, the features, however, being more pleasing the closer the child approaches to the Sambo. Ugly children are rarely found, and deformed ones never; hence it is to be feared that they have the practice of destroying the latter at their birth. * * The Sambos count with their fingers and toes, reckon their days by sleeps, and months by moons. Their dwellings are quickly made. They have no divisions in their huts, but sleep on *crick-eries*, which are formed of posts four or five feet high, driven in the ground, pieces of split bamboo being laid on top. Their whole household property consists of a few iron pots, wooden bowls, spoons, and stools, calabashes and gourds for water, a few small *oushners*, striking staffs, harpoons, etc., with here and there a gun, and some rudely-shaped moccasins hanging up, and generally a few bunches of plantains or bananas tied to the ridge-pole. * * Whatever may be charged against the Sambos, such as petty thieving, indolence, and drunkenness, very few crimes of flagrant enormity are committed, although they are living without religion, and with but few laws. * * I have had no means of ascertaining what the numbers of the Sambos now (1839) are. It has been calculated lately that the whole population [included in what is called the Mosquito Shore] does not exceed 8000, as they have been decreasing for many years, although gradually approaching civilization. The Sambos at the Cape and southward of it are generally a finer race than those to the northward and eastward. * * The Mosquitos of the present day, I think, have degenerated, the causes being the great increase of drunkenness, and the want of good chiefs to stimulate them; and such is their degraded condition, that in a few generations there will be few left to tell the tale of their existence. The white man advancing one way, and the Caribs, with their rapidly-spreading

population increasing in another, will evidently sweep the Indian from his native haunts, and civilization will extend its arms and embrace a shore which has been for ages in a state of blind superstition and ignorance.

Besides the native Indians and Sambos, there is another and very active element in the population of Honduras, viz., the Caribs. The history of their establishment in the country is alike curious and interesting. They constitute all that remains of the aboriginal inhabitants of San Vincent, one of the Leeward Islands. During the contests between the French and English for the possession of the smaller islands of the Antilles, the Caribs of San Vincent were almost invariably attached to the French interest, and gave so much trouble to the English authorities and inhabitants that, after many contests and much bloodshed, they were finally, in 1796, carried *en masse*, to the number of upward of five thousand, to the then deserted island of Roatan, in the Bay of Honduras. The cost of the deportation was not much less than \$5,000,000! A few months afterward, they were invited to the main land by the Spanish authorities, who aided them in founding various establishments on the coast, in the vicinity of Truxillo. Since that time they have increased rapidly, and greatly extended their settlements, both to the eastward and westward of that port. In 1832, a portion of them were induced to take part in the ill-advised attempt of some emissaries of Spain to subvert the republican government. The attempt was unsuccessful, and, in Omoa and elsewhere, resulted in the severe punishment of those who had become implicated. A portion of the latter escaped to a place called Stann Creek, in the alleged jurisdiction of Belize, where they made a temporary establishment; but an amnesty was after-

ward granted, since which time most of the fugitives have returned to their former seats.

When San Vincent was first visited by Europeans, it was found in possession of two distinct families of natives, who had a common language, but differed widely in color and in modes of life. These were respectively called the Black and Yellow Caribs, and the natural jealousies between them were often fomented by the whites into open and exterminating hostilities. When, however, the deportation took place in 1796, the feeble remnants on both sides had been forced into friendly relationship by the weight of common misfortunes. The fusion of blood, nevertheless, had not been sufficiently great to obliterate the original distinctions of color, which are to be observed to this day. It has been supposed that these distinctions were produced, in the same manner that corresponding changes were caused on the Mosquito Shore, by the infusion of negro blood. It is said that some time about 1675, a Guinea slaver was foundered on one of the small islands in the neighborhood of San Vincent, and that the negroes who escaped mingled with the natives, originating what were afterward called the Black Caribs. Subsequent differences arose between these and the pure Caribs, which led to a division of the island, in which relation they were found by the Europeans. This explanation seems probable, for the presence of negro blood in the Black Caribs is evident and palpable. They are taller and stouter than the pure Caribs, and more mercurial and vehement. The latter are short, but powerfully built. Both are active, industrious, and provident, exhibiting in these, as, indeed, in most other respects, decided contrasts with the Sambos of the Mosquito Shore. They are far more civilized in their habits, living in

well-constructed huts, which are kept clean and comfortable. They still retain their original language, which is the true Carib of the islands, although most, if not all of them, speak Spanish, as well as a little English.

They profess and practice the Catholic religion, yet preserve many of their native rites and superstitions. Altogether, they constitute a good and useful laboring population, and form the chief reliance of the mahogany-cutters on the coast. They supply Omoa and Truxillo, as also Belize in part, with vegetables and fresh provisions, and are the chief collectors of skins, sarsaparilla, and other articles exported from Honduras. Intelligent, faithful, inured to the climate, and, moreover, expert in the use of the axe, and with some knowledge of the building of roads and bridges, they must prove of the greatest service in the future development of the vast resources of that country, and of the utmost importance in the construction of the proposed railway between the seas. It is calculated that there are among them fully three thousand men more or less instructed in precisely the kind of work required in the prosecution of the enterprise referred to, and whose labor may be procured for a reasonable compensation.

All travelers concur in awarding high praise to the Caribs (called Kharibees by Roberts) of Honduras. Young says of them :

“They are peaceable, friendly, ingenious, and industrious. They are noted for their fondness for dress, wearing red bands around their waists to imitate sashes, straw hats knowingly turned up, clean white shirts and frocks, long and tight trousers, and, with an umbrella or cane in hand, have an air of great satisfaction with themselves. The Carib women are fond of ornamenting their persons with colored beads strung in various



CARIB TOWN OF TULIAN—PUERTO CORTEZ.



VIEW IN TULIAN.

forms. When bringing the products of their plantations for sale, they appear dressed in calico bodices and lively-patterned skirts, with handkerchiefs tied around their heads, and suffered to fall negligently behind. * * The Caribs can not be considered a handsome race, but they are hardy and athletic. The difference in their color is remarkable, some being coal-black, and others nearly as yellow as saffron. They are scrupulously clean, and have a great aptitude for acquiring languages, most of them being able to talk in Carib, Spanish, and English; some even add Creole-French and Mosquito. * * * Polygamy is general among them, some of them having as many as three or four wives; but the husband is compelled to have a separate house and plantation for each, and, if he make one a present, he must make the others one of the same value; and he must also divide his time equally among them—a week with one, a week with another, and so on. When a Carib takes a wife, he fells a plantation and builds a house; the wife then takes the management, and he becomes gentleman at large until the following year, when another plantation has to be cleared. The wife attends these plantations with great care, perseverance, and skill, and, in the course of twelve or fifteen months, has every description of bread-kind in use among them; and, as the products are entirely her own, she only keeps sufficient at home for her husband and family, and disposes of the rest to purchase clothes and other necessaries. Just before Christmas, the women engage several creers, freight them with rice, beans, yams, plantains, etc., for Truxillo and Belize, and hire their husbands and others as sailors. It is the custom, when a woman can not do all the work required on the plantation, for her to hire her husband, and pay him two dollars per week. The women travel considerable distances to their plantations, and carry their productions in a kind of wicker-basket. I have known them walk from far beyond Monkey-apple town to Fort Wellington, a distance of forty miles, to exchange their baskets of provisions for salt, calico, etc. Men accompany them on their trading excursions, but never, by any chance, carry the burdens, thinking it far beneath them. In the dry seasons, the women collect firewood, which they stack in sheltered places, to be ready for the

wet norths. Industry and forethought are peculiar traits of character in Carib women, consequently they easily surround themselves with necessaries and comforts. The men can hew and plant, hunt and fish, erect a comfortable house, build a good boat, make the sails, etc. Some are capital tailors, and others are good carpenters; altogether, there can not be a more useful body of men. They often go to the various mahogany-works around Roman River, Limas River, Truxillo, or Belize, and hire themselves as mahogany-cutters, for which, by their strength and activity, they are well fitted. They hire for five or six months, sometimes longer, for eight to twelve dollars per month and rations. I have known some Caribs of superior manual power, and who understood the whole routine of mahogany-cutting, obtain as much as fifteen and sixteen dollars a month. On the expiration of their engagement they return to their homes, laden with useful articles, and invariably well dressed. I saw a Carib belonging to Cape Town that had just returned from Belize, who sported a pair of cloth boots, a white hat, black coat, white trowsers, a fancy-colored shirt, a pair of splendid braces, and an umbrella. His coat happened to be an extremely tight fit, and, as he appeared to be very uncomfortable, we asked him to cut up a pine-apple, which, after several vigorous efforts, he succeeded in accomplishing.

“The Caribs grow the Bourbon sugar-cane, and they declare that the soil is well adapted for its cultivation; I have myself seen it sixteen feet in height, and thick in proportion, from the plantation of Captain Samboler, at Zachary Lyon River. Tobacco is now grown in small quantities by the Caribs, and also by the Mosquitians at Patook, but they have not yet discovered the proper method of drying; the tobacco of the one tribe tastes like dried hay, and that of the other is so strong as to occasion bad symptoms to those unaccustomed to its use. If the proper method of preparing tobacco were practiced, it might become an article of exportation. In the interior, among the Spaniards, a large quantity is produced, and conveyed on the backs of mules to Truxillo for sale. Some of the superior sort is made into “puros,” twelve of which can be had for fivepence currency; and three dozen cigaritos for the same price. Their best to-

bacco is not to be compared in flavor to that from Havana, in consequence of the mode of damping and drying practiced by the Central Americans, but it is equal in point of quality and size. The Carib houses are all exceedingly well built, the posts being of iron-wood, subah, etc. ; the rafters and beams of Santa Maria ; the thatch, swallow-tail or cahoon, and wattled with cabbage boards ; they have apertures made for windows with shutters, which are closed in the evening with much care, to prevent the admission of the land wind. The Carib houses being open to the sea-breeze, and always closed against the land wind, is no doubt the main reason of the healthiness of their towns ; much, however, is attributable to their cleanliness, and the plenty in which they live.

“The old people are supported by their sons or other relatives, and are treated and spoken of with much respect, the children seeming to vie with each other in testifying their affection. At every Carib town numerous pigs and fowls, belonging to the women, are indiscriminately running about, for the people prefer making plantations, sometimes as far as five miles from the town, to stying up the hogs, which they would be obliged to do if their plantations were close at hand, as the pigs, in their perambulations, would find them out, and do much mischief. These hogs, when fattened, are sent to Truxillo and other places for sale.”

In the departments of Gracias, Comayagua, and Choluteca there are a number of purely Indian towns, in which the inhabitants retain their ancient language and many of their primitive habits. The cluster of villages in the Mountains of San Juan, to the southwest of Comayagua, viz., Guajiquero, Opotero, Similiton, Cacauterique, etc., as also a number of others among the Mountains of Lepaterique, viz., Aguanquetterique, Lauterique, Cururu, Texiguat, etc., are all purely Indian towns. Their population is industrious, provident, and peaceable. The elevated districts which they occupy enable them to cultivate wheat, po-

tatoes, and other products of higher latitudes, which they carry for sale to large distances. The traveler meets them in the most secluded and difficult passes, patiently pursuing their journeys, and never speaking unless first addressed. They almost invariably carry their bows with them, but only for protection against wild beasts. Their present abodes among the mountains do not appear to have been their original seats, but to have been forced upon them by the gradual usurpation of their lands by the whites, or chosen to avoid a contact which they disliked. They are, nevertheless, exceedingly jealous of their rugged retreats, and are never excited except by some encroachment, real or fancied, upon the limits of the lands pertaining to their respective towns. They all profess the Catholic religion, but their forms of worship, and especially their music, are strongly impressed with aboriginal characteristics.

The existing Indian element in Honduras, left to itself, promises little or nothing for the development of the country; yet, with the introduction of an intelligent and enterprising people, their industry may probably be turned to good account. Frugal, patient, and docile, they have many of the best qualities of a valuable laboring population, and only lack direction to become an important means in the physical regeneration of the country. The Caribs certainly have shown great capacity for improvement, and at their present rate of increase must always be able to supply every industrial demand which may be created on the northern coast, where the climate is least favorable for the introduction of foreign labor.

CHAPTER XIII.

ANCIENT ABORIGINAL FAMILIES—ANCIENT MONUMENTS—
THE LENCAS, ETC.—COMPARATIVE VOCABULARY.

IT appears from the early records that the northwestern portions of Honduras, bordering on Guatemala, and including the valley of Sensenti, of Copan, and a part, if not all, of that of the River Chamelicon, were in the occupation of civilized nations. The name of *Calel* or *Kalel*, which they gave to their chiefs, and the fact that their language belongs to the same stock with the Quiché, Kachiquel, Maya, etc., proves that they pertained to the same great family of semi-civilized nations which spread over Guatemala, Chiapa, and Yucatan.

This is farther shown from the existence, in this district, of ancient monuments, corresponding in type with those of Ocosingo, Palenque, Chichen-itza, etc., and which have been in part made known to us through the works of Stephens, Catherwood, and others. The ruins of Copan, and the corresponding monuments which I examined in the valley of the Chamelicon, it is true, are distinguished by singular and elaborately carved *monoliths*, which seem to have been replaced in Palenque by equally elaborate *basso-relievos*, belonging, it would also seem, to a later and more advanced period of art. Most of what are called ancient monuments in Guatemala and Yucatan are the remains of edifices constructed and occupied by the tribes found in actual possession of the country at the time

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of the Spanish conquest. Such, however, was not the case with those at Copan, although a village or town bearing that name was captured and destroyed by Hernandez de Chavez in 1530.* The Licenciado Palacios, in his description of Guatemala, written in 1576, less than fifty years after the conquest, describes these ruins with great accuracy; and although he sought, on the spot, to learn something concerning their origin, he appealed to history and tradition in vain for information. His account is as follows:

“Pursuing the road to San Pedro, we find in the first town in the province of Honduras, which is called Copan, the ruins of superb edifices which appear to have belonged to a great city, such, it may well be presumed, as could never have been built by a people so rude as the natives of the country. They are situated on the banks of a beautiful stream, in a well-chosen and extensive plain, temperate in climate, fertile in soil, and abounding in fish and game. Among these ruins are trees which appear to have been planted by the hands of man, and other things of a remarkable character. Before reaching them we find very heavy walls, and an enormous eagle carved in stone, bearing on its breast a square shield, each side of which measures nearly a quarter of a yard, and which is covered with unknown characters. Proceeding further, we find the figure of a great giant, in stone, which the old Indians call the guardian of the sanctuary. Still further on is a cross of stone, three palms (*tres palmos*) in height, of which one arm is broken. We next find ruined edifices, the stones of which are sculptured with much skill, and a statue more than four yards in height, which resembles the figure of a bishop, with his pontifical ornaments. A well-carved mitre surmounts his head, and he has a ring on his finger. Near this is a large square (*plaza*), surrounded by steps (*gra-*

* The confusion into which Mr. Stephens seems to have fallen on this point resulted probably from supposing that the name Copan was that of the ancient city; whereas the ruins were so called from Copan, the village or town near which they are found.

dos), which, from the descriptions, resembles the Coliseum at Rome. In some places there are as many as eighty steps remaining. It is paved with beautiful stones, all square, and well worked. Here are six very large statues, three of which represent men with armor in the form of mosaics, and with ribbons bound around their legs. Their arms are loaded with ornaments. Two represent women, with long robes and head-dresses in the Roman style. The sixth is the statue of a bishop, holding in his hands a packet resembling a box. It would seem that these statues are idols, for before each one of them is a large stone, like those which served for sacrifices, with a groove to carry off the blood. We find also the altars on which the ancient inhabitants burned their perfumes; and in the centre of the square is a basin of stone, which, it would seem, served for purposes of baptism, or in which they made their sacrifices in common. Beyond the square we come to an elevation, ascended by a great number of steps, upon which, without doubt, they had dances and celebrated the rites of their religion. It appears to have been constructed with the greatest care, for throughout we find the stones excellently well worked. At one side of this edifice is a tower or terrace, very high, and dominating the river which flows at its base. A large piece of the wall has fallen, exposing the entrances of two caverns, very long and narrow, most carefully constructed. I have not been able to discover any thing in them, nor the purposes for which they were built. There is here a grand stairway of many steps, descending to the river. There are also many other remains, which prove that the country was formerly inhabited by a numerous population, civilized, and considerably advanced in the arts. I endeavored, in all possible ways, to ascertain from the Indians for what purpose these monuments had been built. To this end I interrogated the old men, since their ancient books no longer exist in the country, the only one that I knew of being in my possession; but all that I could learn was that, according to tradition, they had been constructed by a powerful lord who came from Yucatan, and who, after a number of years, returned to his country, leaving the city he had built entirely deserted. And this seems most likely, for tradition also says

that the people of Yucatan formerly conquered the provinces of Ayajal, Lacandon, Chiquamula, and Copan. It appears that these edifices resemble those which the first Spaniards discovered in Yucatan and Tabasco, where also there were figures of bishops and armed men, as well as of crosses."

While, therefore, the relationships of the ancient as well as modern inhabitants of northwestern Honduras are obviously with the nations of Guatemala and Yucatan, those of the aborigines of the remaining parts of the state are not so clear. The chroniclers speak of a number of barbarous nations as existing in the wide region embracing the coast from the Rio Aguan (or Roman) to that of San Juan de Nicaragua (subsequently designated as the Mosquito Shore), and extending inland as far as the plains of Olancho or Ulancho. Among the tribes who inhabited this region, and who were relatively savage and barbarous, the Xicaques and Payas (or Poyers) are constantly referred to as the principal and most powerful. These names are still retained by the Indians who occupy the country lying between the Rio Ulua and Cape Gracias á Dios. The Xicaques, greatly reduced, exist in the district lying between the Rio Ulua and Rio Tinto, and the Payas in the triangle between the Tinto, the sea, and the Rio Wanks, or Segovia. It seems probable that the Xicaques were once much more widely diffused, extending over the plains of Olancho, and into the Department of Nueva Segovia, in Nicaragua.

The question then arises, What nations inhabited the country between the Chortis of Sensenti and the Nahuatls of San Salvador on the one hand, and the barbarous nations of Totogalpa and Tegucigalpa on the other? In other words, what nations occupied the present Department of San Miguel, in San Salvador,

and those of Santa Barbara, Comayagua, Choluteca, and part of Tegucigalpa and Yoro, in Honduras?

No explicit answer to this inquiry can be found in the early histories, but recent investigations may serve to clear up any doubts on the subject.

That this district of country was occupied by a homogeneous people is primarily indicated by the names of places which have been retained from the period of the conquest. The present Department of San Miguel was called *Chaparristique* when it was invaded by Alvarado, and we find this termination *tique* constantly recurring in the names of places, such as Lepaterique, Llotique, Ajuterique, and Jaitique, from the Gulf of Fonseca northward to the Lake of Yojoa or Taulebé.

Within this district there are a number of towns which are wholly inhabited by Indians, who possess more or less of their original language. These towns are all situated in the mountains of Lepaterique and Guajiquero, embracing Lauterique, Guajiquero, Opatoro, Cacauterique, Similiton, Yamalanguira, Yucusapa, and the large town of Intibucat. I succeeded in obtaining a short vocabulary of the dialect of Opatoro from an Indian of that town whom I encountered in Comayagua. I also obtained another of the dialect of Guajiquero, which place I visited in June, 1853, and subsequently a brief one in the town of Yamalanguira, two leagues to the westward of Intibucat, and close upon the district of the ancient chiefs of Sensenti. I afterward obtained a list of the numerals used by the people of Similiton, together with a few words and phrases, from a gentleman of Tegucigalpa, who in his youth had spent some time in that town. It appears, from a comparison of these vocabularies, that they are all dialects of a single language. The Guajiqueros

pronounced their language the *Lenca*, and as we find the *Lenca Indians* constantly referred to in the accounts given by the early missionaries of their expeditions in Honduras, I have adopted this name to designate both the Indians who occupied the district under consideration and their language.

Most of the missionaries who sought to penetrate the regions of the Xicaques and Payas first went to Comayagua, where they are almost always spoken of as employing Lenca Indians to assist them in their expeditions. They accompanied Verdelete when he went through Olancho, by way of the Rio Guyape, into the country of the Xicaques in 1608. This leads us to conjecture that the Xicaques may possibly have been of the same stock with the Lencas, speaking dialects of the same language. This conjecture derives support from the expressions used by Juarros, in his account of the reduction of the province of Tegucigalpa. He says that in 1661 the Paya Indians frequently plundered the small settlements contiguous to their territories, and that the Xicaques committed depredations in the valleys of Xamastran and Olancho. This led Captain Bart. de Escoto, one of the proprietors of Olancho, to lead an expedition into the Indian country, which he did, bringing away "several Indians, whom he settled in such places as he deemed most convenient." He then, "with the Lenca Indians, went to Guatemala in search of a minister." The person recommended to him by the President was the friar "Fernando de Espino, a learned ecclesiastic, who, being a native of New Segovia, a town bordering on the lands of the Xicaques, *was well acquainted with the Lenca language.*"*

* The Bishop Pelaez, who, however, is very loose in his statements generally, gives an account of these circumstances, in which he speaks of the "damages

Indeed, it is not improbable that dialects of a common language were spoken by all the aboriginal tribes lying between the Bay of Honduras and the great transverse valley of the Nicaraguan lakes, excepting those who inhabited the low, or lagoon country on the Atlantic coast, now called the Mosquito Shore, and who seem to have had little affinity with the families of the interior. Thus the Indians in the district of Chontales, in Nicaragua, living on the banks of the great river Escondido, of whom Mr. Froebel obtained a short vocabulary in 1851, have a few words in common with the Lencas.* These Indians are now called Woolwas (probably the Gaulas or Waulas of Juarros, and the *Uluas* of Pelaez). Their word for water is *wass* or *wash*, and enters into the name of one of the rivers in their territories, a branch of the Escondido, viz., *Boswash* or *Boswass*. In the Lenca, water is *güass*, *uash*, or *guash*. In the Lenca, house or hut is *taoo* or *tahü*; in the Woolwa, it is *ü* or *hü*. The word *was* or *huass* also enters into the names of some of the rivers in the district of the Payas, as *Amacwass*, *Wass-presenia*, the designations of tributaries of the River Patuca.

The inhabitants of the Atlantic coast of Central America, at the period of the discovery, from Punta Castilla de Honduras (anciently *Punta Casinas* or *Caxinas*) to Chiriqui Lagoon (the *Abuerma* of Columbus),

caused by certain tribes of *Payas* known as *Jicaques*;" and says that there were "tres de estos infideles" (*three of these infidels*) who accompanied Escoto to Guatemala. He also speaks of the Fray Espino as reaching the "*Parakas* Indians of the Lenca nation." According to Juarros, we may legitimately infer that the Xicaques and Lencas were of one family, or, at least, spoke one language; and, from the statements of the bishop, that the Xicaques and Payas are of one stock. From both we may deduce, what is probably not far from the truth, that all belonged to a single group.

* See my work on Nicaragua, vol. ii., p. 324.

were completely savage. This coast, as I have already said, is for the most part low, hot, and unhealthy, and traversed by innumerable lagoons or creeks, affording conditions only favorable for tribes of hunters and fishers; and such, in fact, was the character of the Indians found there by the early voyagers, and such they have remained to this day. The same causes which deterred the semi-civilized nations of the Pacific declivity of the continent, and of the interior table-lands, from occupying this coast, operated to prevent its settlement by the Spaniards, and have retained it within the dominion of untamed nature.

As I have said in a preceding chapter, this coast was discovered by Columbus in his fourth voyage, in 1502. He coasted along it from Punta Castilla to Darien, and, from the concise but clear accounts which have been preserved of his voyage, we are able to obtain very accurate notions of the character and conditions of the inhabitants.

The first land discovered by Columbus in this voyage, after leaving Jamaica, was that of the island of *Guanaja*, the easternmost of a group lying in the Bay of Honduras, and within sight of the main land, which were long known as the *Guanajas*. He reached this island July 30, 1502. Don Bartolome Columbus was sent ashore, where he found a large canoe, "as long as a galleon," covered with an awning, and laden with commodities, such as cloths of cotton of various colors, a species of jacket without sleeves, swords made by inserting flints in the edges of pieces of wood of the proper shape, copper axes, crucibles for melting copper, and the beans of cacao, "which were used as money." Columbus dismissed the people, excepting an old man, who seemed to be "more discreet" and better in-

formed than the others, named *Jumbe*, whom he reserved as an interpreter and guide. Being shown gold, this Indian pointed out the main land, the mountains of which were within sight, as the region where it could be found. This Indian, it may here be observed, is called a "merchant" in the chronicles, and Herrera ventures the remark that he was returning from Yucatan when discovered by Columbus.

There can be no doubt that the inhabitants of the Guanajas constituted a single family, considerably advanced in civilization, and probably pertaining to the same stock with those occupying the main land between Punta Castilla westward to the Gulf of Dulce. Diego de Porras, in his account of the voyage of Columbus, describes them as of "fine stature, warlike," but modest and retiring in their demeanor. The island itself is described by Peter Martyr as "so flourishing and fruitful that it might seem an earthly paradise."

Columbus reached *Punta Caxinas* on the fourteenth of August, and formally landed and took possession of the country on the seventeenth of the same month. This is the point which shuts in the bay at the head of which Truxillo was afterward founded. The people found there are described as similar to those of the Guanajas. They were dressed in a like manner, in cotton cloth, and had a species of armor, like the Mexicans, made of quilted cotton, which was so thick, as we are assured by Fernando Columbus, as often to resist the strokes of the Spanish swords. There are reasons for believing that the aboriginal inhabitants of the region immediately around Truxillo were connected with those who dwelt to the westward and in the interior of the country, including the great valleys or plains of Olancho, where there were two important provinces

governed by powerful chiefs, who had jurisdiction over the coast at Truxillo. Of the character and habits of the Indians here we have but little information. Herrera tells us that when Salcedo was appointed governor of *Ybueras* (Honduras), he applied himself to "know the religion, customs, and capacity of the Indians of that province." He found three principal idols worshiped in the vicinity of Truxillo; one in a temple four leagues from that town, another twenty leagues distant, and a third on an island fifteen leagues distant.* They had all the shape of women, made of a variety of green stone like marble. They had also other idols and places of worship where they offered sacrifices. The high-priests at each of the three principal temples could not marry. They wore their hair long, reaching to their waists. Salcedo farther testified that "the people were not so polite as the Mexicans," and that they "differed little from those of Hispaniola."

After leaving *Punta Caxinas*, Columbus proceeded eastward along the coast, and a few days afterward landed at the mouth of a great river, where he again took possession of the country, calling the river, from this circumstance, *Rio de la Posession*, now Rio Tinto, or Black River. The Indians here and to the eastward "had not great foreheads like the islanders." They spoke several languages, tattooed themselves in various ways, and had, moreover, "great holes in the lobes of their ears, through which an egg might pass," whence he named this coast "*la Costa de la Oreja*," the Coast of the Ear. Fernando Columbus, in his History, distinguishes the inhabitants here, and along

* The island here referred to was probably that of Guanaja, where, as we have elsewhere seen, aboriginal monuments of considerable extent are still to be found.

the whole coast to the eastward, from those at *Punta Caxinas*. He says: "But those to the eastward, toward Cape Gracias á Dios, are almost negroes, beastly, going naked, in all respects very rude, eating, according to the Indian Jumbe, human flesh, and fish raw, as they happen to be caught." Porras correctly describes the coast as "*tierra muy baja*," very low land, inhabited by a very savage people.

On the fourteenth of September, after great difficulties, resulting from adverse winds and currents, Columbus reached a cape whence the coast trended abruptly to the southward, which he called, in token of thankfulness, *Cabo Gracias á Dios*, Cape Thanks to God. He found here a large river entering the sea, and he sent a boat to examine it, which was upset, and some sailors lost, whence he called it *Rio del Desastre*, River of the Disaster. He says nothing about the inhabitants whom he found here, but the inference is very distinctly conveyed by Fernando Columbus that they differed in no essential respect from those of the Costa de la Oreja. He describes the detention of the ships, and the difficulties which they encountered until the twenty-fifth of September, when they reached an island called *Quriviri*, where there was a town on the main land called *Cariac*. Here, he says, the land became higher, and "there was a better country." Columbus named the coast here, from the town on the main land, *Cariac* or *Cariay*. In his letter to the Spanish sovereigns he speaks of the inhabitants as fishers, and as "great sorcerers and very terrible." Upon landing, he found several large wooden houses, thatched with palms, which were sepulchres. In one of these was a dead body embalmed, "*embalsamado*;" in another were two bodies, all "without bad odor," carefully wrapped

in cotton and mats. Over these bodies were tablets of wood, carved with various figures of animals and other objects, and on some "were representations of the dead." The people had some ornaments of native gold and instruments of copper. They were tattooed. Their language was difficult, and the different towns had different dialects; "but while this was the case among the savages of the coast," Columbus thought "it otherwise among the people of the interior." Herrera distinguishes the people of Cariay from those to the northward, and describes them as like the inhabitants of Castello de Oro, which was the early designation of the country from Chiriqui Lagoon southward to the Gulf of Uraba.

From Cariay Columbus proceeded on his course until he reached *Zerabora* (now Boca del Toro), which was close to *Abuerma* (now Chiriqui Lagoon). Here the people had plates of gold like those of Cariay, and, it would seem, spoke a cognate language, since, in the words of Herrera, "they showed no fear, because the two Indians of Cariay spoke to them." These Cariay Indians are also spoken of as persuading those of *Abuerma* to give up their golden ornaments.

From all these facts it appears that Honduras was anciently occupied by at least four distinct families or groups of aborigines:

I. THE CHORTIS of Sensenti, belonging to the same great group with the Quichés, the Kachiquels, Mayas, etc., and occupying what is now the Department of Gracias.

II. THE LENCAS, less advanced in civilization, and, under the various names of Chontals, and perhaps Xicaques and Payas, occupying what is now the Department of San Miguel in San Salvador, of Comayagua, Choluteca, Tegucigalpa, and parts of Olancho and Yoro in Honduras, including the islands of Roatan, Guanaja, and their dependencies.

III. Various tribes intervening between the Lencas proper and the inhabitants of Cariay, or what is now called the Mosquito Shore, such as the Toacas, Tonglas, Ramas, etc. ; and,

IV. The savages who dwelt on the Mosquito Shore, from near Carataska Lagoon southward to the Rio San Juan, and who then spoke, as they still speak, a language entirely distinct from the dialects in use among the Indians of the interior, to whom they were in no respect equal.

In partial illustration of the observations here presented, I submit the following brief comparative vocabulary.

Brief Vocabulary of the Lenca Language, as spoken in the towns of Guajiquero, Opatoro, Intibucat, and Similaton.

English.	Guajiquero.	Opatoro.	Intibucat.	Similaton.
man,		taho(ocel man),	amashe.	
woman,		move,	napu,	mab.
boy,		guagua,	hua.	
father,		paab,	ipaba.	
mother,		mini,	imini.	
husband,	üashu,	ambüashu,	yashu.	
wife,	moba,	aumob,	imapu.	
daughter,	bpsa,		iguimapi.	
brother,	ouyoba.			
sister,	mipila.			
head,	toro,	tohoró,	cagasi,	toro.
hair,	asa,	asha,	cagashi.	
face,	amptiga,	amptiga,	tije.	
forehead,		ampolse'h.		
ear,	yang,	yan,	yangaga,	yoan.
eye,	saing,	saringla,	saring,	saarim.
nose,	napse,	napseh,	nepton,	nepse.
mouth,	ingh,	ambeingh,	ingori,	yam.
tongue,	nafel,	navel,	napel,	nepel.
teeth,	nagha,	ne-aa,	nigh,	neé.
beard,	inchnü,	inchnü.		
neck,	ampshala,	ampshala,	cange.	
arm,	kenin,	kenin,	kening.	
hand,	angulal,	gulala,	gualasing.	
fingers,	lasel,	gualalasel.		
belly,	mamguera,	mamguera,	mamguera.	
leg,	quaing,	quaing,	kila.	
feet,	güagl,	güagl,	guaskaring.	
knees,	kuto,	gu-ute.		

English.	Guajiquero.	Opatoro.	Intibucat.	Similaton.
blood,	uahng,	uah,	quch.	
town,	gueran,	gueran.		
house,	tahü,	taoo,	tahu.	
hatchet,	iahua,	iahua.		
tortilla,	éié,	éié,	eta,	ei.
tobacco,	iahua,	uhua,	gua.	
sun,	gasi,	gashi,	gashi.	
star,	siri,	siri.		
light,	gâss,	gasha.		
night,	taughe,	taughe.		
afternoon,	tealeh,	telhueno.		
wind,	soror,	soror,	soor.	
lightning,	leepseesen,	lepshina,	malauki.	
fire,	uga,	'ua,	yuga,	yucc.
water,	guass,	uash,	guash,	güas.
earth,	lu,	lu.		
river,	ugara,	huara.		
valley,	tega,	teca.		
mountain,	cotang.			
stone,	caa,	coa,	tupan.	
iron,	teboste,	teboste.		
maize,		ama,	ama.	
tree,	ili,	ili,	ili.	
spring,	poro,	poro.		
grass,	shir,	shiri,	shishi.	
pine,	yong,	yong,	shiguala.	
flesh,	ragh,	raah,	rah,	rac.
deer,	ahuinge,	ahuinge.		
dog,	shui,	shui,	shushu,	sui.
rabbit,	mong,	mong,	mo-ou.	
snake,	salala,	salala,	sala.	
white,	shogo,	shogo,	shogo.	
black,	sihiri,	sihiri,	seriga.	
red,		sheula.		
blue,	seega,			
small,	poore,	poore,	shuisquali.	
death,	careenu,	garena.		
cold,	meetima,	mee-ti,	carascau,	miti.
I,	oona,	oom.		
them,	amna,		una.	
us,	mutan,		elagan.	
this,	nahna.			
that,	nanaina.			
near,	naftelina,	eueleua.		
yesterday,	telvan,	telran.		
to-morrow,	shawa,	shawa,	guelta.	
to eat,	coorta,	gorkin,	gormal,	ulanta.
to drink,	supatah,	talgui,	talmal.	

English.	Guajiquero.	Oparatoro.	Intibucat.	Similaton.
to run,	ilta,	ilging,	ishemal.	
to dance,	ulta,	ulging.		
to sing,	iguetah,	iguen.		
to talk,	molta,	moltome,	malmal.	
to see,	ishta,	ishking,	sarajamal.	
to kill,	kashta,	kashking,	gushkal.	
to smoke,	paihme.			
1,	ita,	ita,	itaska,	eta.
2,	naa,			pé.
3,	lagua,			lágua.
4,	aria,			eslea.
5,	saihe,	saihe,		say.
6,	huie,	hue,		guilli.
7,	huisca,			guisca.
8,	teefca,			tefca.
9,	kalapa,			calapa.
10,	isis,	isis,		isis.
11,	isislita,			isislaita.
12,	isislapa,			isislape.
13,	isislagua,			isislagua.
20,	guamasta,			guamasta.
21,	guamastalita,			guamastalaita.
30,	guamastalasis,			guaneastalasis.
40,	cueta,			cueta.
50,				cuetalasis.
60,				cuetaguamasta.
70,				cuetaguamastalasis.

With a view of facilitating comparison, I may add here a brief vocabulary, obtained by Mr. Julius Froebel in the District of Chontales, Nicaragua, bordering on Honduras, in the year 1851. It is of the language or dialect spoken by the Ulüas or Woolwas, to which farther reference is had in the chapters on Nicaragua.

WOOLWA—*Spoken by the Indians of Chontales, Nicaragua.*

English.	Woolwa.	English.	Woolwa.
sun,	maa.	mountain,	asang.
day,	maada.	man,	all.
star,	maabka.	woman,	yall.
moon,	náigo.	father,	papani?
fire,	cuh.	mother,	mamani?
water,	wass.	son,	paunima.
earth,	sano.	daughter,	paucoma.
night,	baraca.	boy,	teguis.
air,	uing.	girl,	batanil.

English.	Woolwa.	English.	Woolwa.
brother,	uajini.	fish,	tabomm.
sister,	amini.	to sleep,	amacuting.
head,	tunni.	to eat,	tecuting.
arm,	uacálni.	I am,	acaralaúyang.
foot,	cálni.	thou art,	ayalalaúga.
eye,	miniktaka.	he is,	alaslaúga.
nose,	nágnitak.	we are,	yaralalauca.
mouth,	dinibas.	ye are,	laucayalálauca.
blood,	anasscá.	they are,	cauyoadá.
house,	ũ.	1,	aloslaj.
town,	ualna.	2,	muyebu.
plantain,	uagi.	3,	muyebas.
sugar,	disnok.	4,	muyarunca.
cow,	sana.	5,	muyesinca?
milk,	sanadagoscá.	6,	dijca, <i>or</i> muydijca.
horse,	pomca.	7,	bajca, <i>or</i> muybajca.
tiger,	nágua.	8,	muyacca.
dog,	sulo.	9,	yaccabavo.
cat,	nisto.	10,	muyhasluy.

Colonel Don Juan Galindo published in the Transactions of the Royal Geographical Society of London, vol. iii. (1833), p. 290, a notice of the Caribs established in Honduras, and presented the following brief vocabulary of their language, which will be found, on comparison, to be identical with the Insular Carib, or the language spoken by the Caribs of the islands, as distinguished from the Continental Caribs of South America.

CARIB—*North Coast of Honduras.*

English.	Carib.	English.	Carib.
sun,	wello.	feet,	ugudi.
moon,	hati.	head,	waichic.
stars,	wuruguma.	hand,	wajap.
fire,	wat.	1,	abama.
water,	duna.	2,	biama.
sea,	barana.	3,	irwa.
canoe,	gureira.	4,	biamburi.
island,	uban.	5,	abanawajap.
hill,	uipu.	6,	abanala <i>junaguri</i> .
tree,	güegüe.	7,	biamala <i>juaguri</i> .
negro,	méguero.	8,	irawala <i>juaguri</i> .
Indian,	idudu.	9,	biamburila <i>junaguri</i> .
white man,	barau agueri.	10,	sunwajp.

CHAPTER XIV.

POLITICAL ORGANIZATION—CONSTITUTION—RELIGION—EDUCATION—INDUSTRY—REVENUES—CURRENCY—FUTURE PROSPECTS.

THE dissolution of the Federal Republic of Central America in 1838 left the various states which had composed it in a singular and anomalous position. Some of them, including Honduras, still adhered to the idea of nationality, and while, in fact, exercising all the powers of distinct sovereignties, they carefully avoided taking the title. They called themselves *States*, and named their highest executive officers “chiefs” or “directors.” They supplied the want of a common or national constitution by means of treaties of alliance and friendship, which, in certain contingencies, bound them to support each other by force of arms.

The three central or liberal states, Honduras, San Salvador, and Nicaragua, nevertheless cherished the hope of reconstructing the confederation, and exerted themselves to procure the concurrence of Guatemala and Costa Rica. To this end a national convention was called in 1842, and subsequently another in 1847; but, from the neglect or refusal of the states last named to send delegates, as also from the difficulty of defining satisfactorily the relative powers of the allied states themselves, the attempts at union failed.

Finally, abandoning the hope of inducing Guatemala and Costa Rica to enter into the proposed new federal republic, the central states, in 1849, sent commission-

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ers to Leon, in Nicaragua, where they agreed upon a basis of union or pact, under the title of the "National Representation of Central America." This pact was unanimously ratified by the people of the several states in their primary capacity, and delegates were chosen, in accordance with its provisions, to frame a national constitution on the principles laid down in its articles. This constituent assembly met in the city of Tegucigalpa, in Honduras, in the autumn of 1852, and proceeded to the discharge of its duties. But, meantime, the reactionary element in Guatemala had brought such influences to bear upon the government of San Salvador as to induce it to withdraw its delegates from the convention. This example was soon after followed by the government of Nicaragua, and, as a consequence, the assembly was broken up.* To Honduras, therefore, remains the honor of having adhered to the principle of union and nationality to the last moment:

"Faithful among the faithless found!"

Since that event, both Nicaragua and San Salvador have assumed the name of republics; and although this step has not been taken by Honduras, that state may nevertheless be regarded as a distinct nationality. Its constitution, framed in 1848, "in the name of the Eternal Being, the Omnipotent Author and Supreme Legislator of the Universe," is thoroughly republican in its provisions. The Declaration of the Rights and Duties of the People sets forth that

Sovereignty is inalienable and imprescriptible, limited to the welfare and convenience of society, and no

* For an "*Outline of the Political History of Central America*," including the history of Honduras, see my work, "*Nicaragua, its People, etc.*," vol. ii., p. 365-452.

fraction of the people, nor can individuals exercise it, except in conformity with laws established by the general consent. All power emanates from the people, and all public functionaries are their delegates and agents, but only to the extent defined by written constitutions, or decreed by laws framed in conformity with them. Such functionaries are furthermore amenable, even with their lives, to the people, who have intrusted them with power, for its faithful discharge. All the inhabitants of the state have the indisputable right of life, liberty, the pursuit of happiness, and the acquirement and disposition of property, in modes not detrimental to the rights and well-being of others. They are, at the same time, obliged to respect and obey the laws, and to contribute, to the just proportion of their means, in support of the expenses of government, not less than with their lives, if necessary to the service and defense of their country. Armies can only exist for the public protection and defense of the state, and no member of the army, while in active service, is eligible to the office of president, senator, or deputy. The press is free, and every citizen may write and publish, without censorship or hinderance, amenable only to the laws for the abuse of his privileges. No citizen can be tried by military tribunals except for offenses committed while in actual service in the army. Every citizen has the right of expatriation. Epistolary correspondence is inviolable; nor can stolen or intercepted letters be used in evidence against their writers. All causes of difference between citizens may be decided by arbitration, and the parties may at any time withdraw their suits from the jurisdiction of the courts, and submit them to arbitrators, whose decision in all cases shall be final.

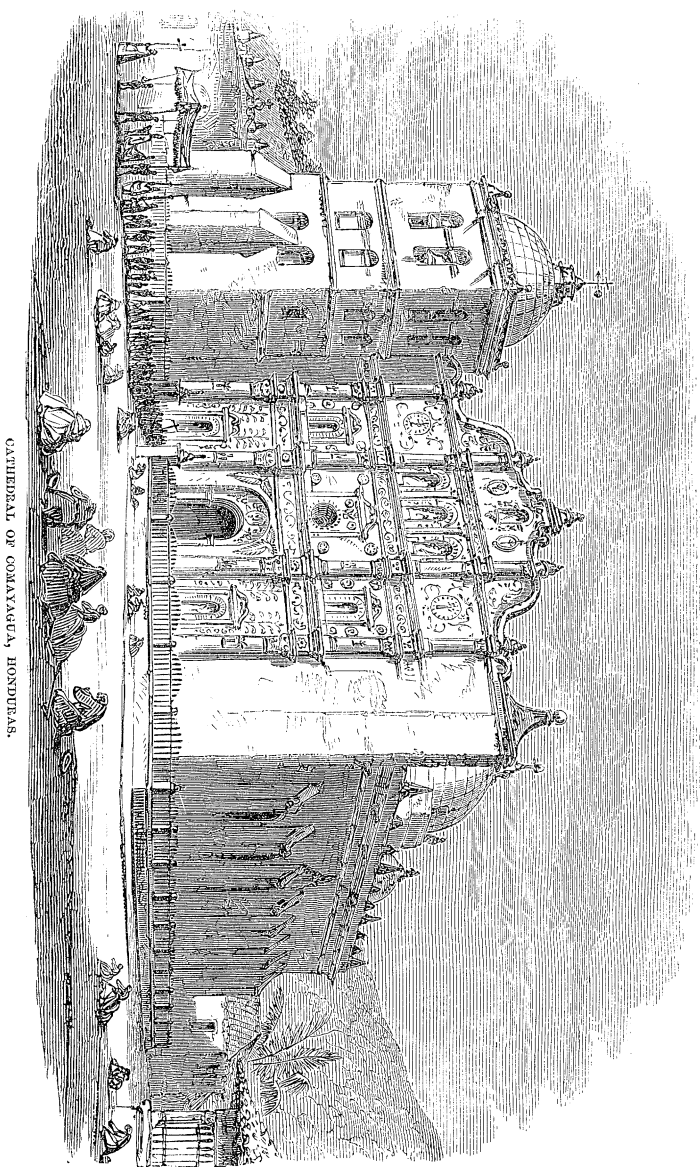
The general organization and powers of the government, as set forth in the Constitution, may be summed up as follows :

Citizenship.—All persons born in the state, or in the other states of Central America, and resident in the territories of Honduras, are recognized as citizens. Foreigners may acquire the rights of citizens by legislative act, but nevertheless shall be entitled to the same protection with citizens from the moment they have declared their intentions to become such before the competent authorities.

The right of suffrage belongs to all citizens over twenty-one years of age, “*but after 1870 it shall be limited to such only as may then be able to read and write.*” This right, as well as the title of citizen, is lost by entering foreign employ or by criminal conviction. It is suspended during criminal processes against the person by conviction of fraudulent indebtedness, by notoriously vicious conduct, moral incapacity legally declared, *and by entering domestic service near the person.*

Foreigners become naturalized by holding real estate of a fixed value, by residence of four years, and by marrying in the state. They are obliged to pay taxes in common with the citizens at large, and have the same right to appeal to the courts.

Government and Religion.—The government is popular and representative, and composed of three distinct powers, viz., legislative, executive, and judicial; the first residing in the General Assembly, the second in the President, and the third in the courts. The state recognizes the Apostolic Roman Catholic religion, to the exclusion of the public exercise of all others; but no laws can interfere with the private exercise of other



CATHEDRAL OF COMAYAGUA, HONDURAS.

forms of worship, nor with the fullest liberty of conscience.

Elections.—The state is divided into election districts of fifteen thousand inhabitants, each entitled to one deputy; but, pending a census (not yet made), the several departments each elect one senator and two deputies. As there are seven departments, it follows that the legislative body is composed of fourteen deputies, half of whom are elected annually. A deputy must be at least twenty-five years of age, a citizen of the department which elects him, a proprietor to the value of \$500, or in the exercise of some profession or art which yields that annual return. The senators are seven in number; they must not be less than thirty years of age, proprietors each to the value of \$1000, or licentiates in some of the liberal professions. Three of the seven are elected annually. Eight deputies and five senators constitute a quorum of the Legislature, of which the ordinary sessions are limited to forty days. The Legislature imposes taxes; names, in joint session, the magistrates of the Supreme Court of Justice; grants the annual appropriations; fixes the military contingent; controls the educational system; makes war or peace; ratifies treaties; and has the power of impeaching and trying the executive officers of the state, etc.

The Executive.—The executive power is vested in a President, who must be a native of Central America, a citizen of the state for five years, thirty-two years of age, and a proprietor of real estate to the value of \$5000. He must receive an absolute majority of votes; or, in case no candidate receives such majority, the Legislature elects one of the two having the highest number of votes. The President holds his office for four years, and is incapable of being elected to serve

for two consecutive terms. He may select his ministers for the various departments of government, who have, *ex officio*, a seat in the Legislature, but are not entitled to vote. His remaining duties and powers are such as usually pertain to a republican executive, including the power of the veto. He is especially empowered to make contracts for colonization, and for the general development of the resources of the state, which are subject to the legislative sanction.

Council of State.—This council is composed of one senator, elected by the General Assembly; one magistrate of the Supreme Court, selected by his associates; the Minister of Domestic Relations; the Treasurer of State; and two citizens, distinguished for their services, who are named by the General Assembly. Their duties are, for the most part, advisory, but in cases of emergency they may exercise extraordinary powers, subject to the subsequent entire revision of the General Assembly. The necessity of the council results from the difficulties in the way of convening the Legislature in cases requiring prompt action, owing to the delays in communication, and the diffusion of the people over a wide territory.

Judiciary.—The judiciary consists of a Supreme Court of Justice, divided into two sections of three magistrates each, one of which is established in the city of Comayagua, and the other in that of Tegucigalpa. They must be composed of advocates of established reputation, twenty-five years of age, and proprietors to the value of \$1000. They are elected, on recommendation of the executive, by the General Assembly, and hold their offices during good behavior. They take cognizance of all causes of a general character, or which may be brought up to them from the inferior or district

courts, the attributes of which are set forth with great minuteness and care. All persons accused of crime must be examined within forty-eight hours after their arrest, and the judge must decide upon their detention or liberation within the next twenty-four hours.

No person can be called upon to testify against himself, nor against any of his relatives within four degrees of consanguinity. Capital punishment is abolished.

Departments.—Each department has a chief officer, called “Jefe Politico,” named by the executive, who must be twenty-five years of age, and a proprietor in the department where he is named. He is the organ of communication between the central government and the people of the departments for the promulgation and execution of the laws. The officers of every municipality must be able to read and write, and must act in concert with the political chief of the department.

Such are the outlines of the Constitution, under which the internal affairs of the country seem to be well administered. Few cases of importance come before the courts, since all offenses of a petty nature are summarily disposed of by the municipal authorities.

Although the Catholic religion is the only one recognized by the Constitution, it is not to be inferred that the government and people of Honduras are intolerant and bigoted. There is probably no state of Central America in which there prevails so great a degree of liberality in respect of religion. This has resulted from a variety of causes and circumstances connected with the history of the country. Both at the time of the separation from Spain and subsequently, during the struggles attendant on the organization of Central America as a republic, the Church, as represented by the great body of the priesthood, took an active part

with the aristocracy and Monarchists against the Liberal or Republican party. The struggle was so protracted and bitter as not only to estrange the great mass of the people from the Church, but to lead them to limit its power and influence by the most decisive measures, when their own success enabled them to do so with safety. The first blow fell upon the Archbishop of Guatemala, who was banished from the republic. The members of all the monkish orders were next expelled; the convents were suppressed, and the estates and revenues pertaining to them confiscated for educational purposes. The sale of indulgences and the promulgation of papal bulls were also prohibited; and finally, in 1832, the laws recognizing the Catholic creed as the faith of the country were not only abrogated, but religious freedom unconditionally decreed by the general Congress. The State of Honduras distinguished itself by action still more decided. It passed a law legitimatizing all the children of priests, entitling them to bear the names and inherit the property of their fathers, and declaring the cohabitation of priests with women to be an evidence of marriage in every legal sense, and subjecting them to all of its responsibilities. It was in vain that bishops and popes rained their bulls of excommunication and malediction upon the republic. A special excommunication, directed against the president, Morazan, was put into a cannon by a common soldier, and fired off in the direction of Rome, in token of contempt and defiance; and, although these extreme measures were naturally followed by a degree of reaction, and in Guatemala, the seat of the old viceroyal court and centre of monarchical influences, by the re-establishment of the convents and priestly censorship of books, still, in the remaining states, the power and

prestige of the Church remained permanently broken down; and while it may be conceded that there is much of ignorance and superstition among the people at large, it may at the same time be doubted if, under the general deference to religion among the better classes, there really exists a faith in papal infallibility or a real devotion to the dogmas of the Church; and although the people of Honduras, in common with those of Central America in general, are nominally Catholics, yet, among those capable of reflection or possessed of education, there are more who are destitute of any fixed creed, Rationalists, or, as they are sometimes called, Free-thinkers, than adherents of any form of religion.

Honduras was early established as a bishopric, with its episcopal seat at Truxillo, whence it was removed to Comayagua, where a cathedral was built, and where it still remains. For many years the see had remained vacant, until 1854, when it was filled by the consecration of Señor Don Hippolito Casiano Flores, the present incumbent. Finally, it may be observed that the Church in Honduras is supported only by voluntary contributions and a small annual appropriation on the part of the state. It is without rents or revenues of any kind.

Honduras has two universities; one established in the city of Comayagua, and another in Tegucigalpa. They have nominally professorships of law, medicine, and theology, but, in fact, their course of instruction is little in advance of that of the common schools of the United States, except, perhaps, in the department of languages. In the department of natural sciences, and in those studies of greatest practical importance to the development of the resources of the country, chemis-

try, engineering, the higher mathematics, they are entirely deficient, and much behind those of Nicaragua, San Salvador, and Guatemala. Indeed, most of what are called educated men in the state have received their instruction in foreign countries or at the institutions just named. Efforts have been made to elevate the character and efficiency of these establishments in Honduras, but they have been too feeble to produce any important change. Still, the fact that they have been rescued from a state of entire suspension, and are not deficient in pupils in the elementary branches of knowledge, gives encouragement for the future, and, with the restoration of peace and the return of national prosperity, there is reason to believe they may become an honor to the country.

The Lancasterian system of education was introduced in Central America during the existence of the Federation, and has been continued, with some modifications, in the various states. The requisite data for estimating the public or common schools of Honduras do not exist, since such few returns from the departments as have been incidentally published in the official paper are confessedly imperfect. On a very liberal estimate, there may be four hundred schools in the state, with an average attendance of twenty-five scholars each, or an aggregate of ten thousand pupils of all classes in a total population of three hundred and fifty thousand. There are no libraries in the state worthy of mention, and, besides the government Gazette, no newspapers. There are several presses, but they throw off little except acrimonious political pamphlets, or hand-bills of a personal character. It follows from these facts that the ignorance of the people at large is profound and melancholy.

Very few data exist for calculating either the amount or value of the industrial products of Honduras. Its exports consist solely of bullion, mahogany, hides, sarsaparilla, tobacco, cattle, and a small amount of indigo; and its imports of cottons, silks, hardware, etc. The value of these exports may be estimated approximately as follows:

Bullion	\$300,000
Mahogany and other woods	200,000
Cattle	125,000
Hides, sarsaparilla, tobacco, indigo, etc.	200,000
	<u>\$825,000</u>

The value of the imports of the state is also to a great degree conjectural, owing to the fact that the customs at several ports are farmed out to individuals, whose interest it is to conceal their actual amount. The number of vessels entering the ports of Omoa and Truxillo, on the Atlantic coast, with their tonnage, etc., for the year 1856, is as follows:

	Vessels.	Tonnage.	Crews.
Honduras	61	2620	304
British	48	2104	198
Spanish	16	858	153
American	9	1674	68
Dutch	8	404	42
Totals	142	8326	765

It should be explained that, although the number of vessels which entered the above-named ports in 1856 was 142, with a tonnage of 8326, yet only 25 different vessels, with a tonnage of 2149, or an average of 86 tons, in reality entered. Most of the entries were made by two or three small schooners running between these ports and Belize. The value of the cargoes of the vessels enumerated in the above table, according to official returns, was

1856, Omoa	\$191,287
“ Truxillo	102,968
Total	\$294,255

The official statements of these values are always underrated, and it may be safely estimated that the aggregate of imports to the ports above named, for 1856, was not less than \$450,000. It is not to be disguised, however, that with the opening of the Panama railway, and the establishment of a regular line of coastwise steamers running in connection with it on the Pacific coast, the foreign commerce of the state is rapidly taking the direction of the Bay of Fonseca; at any rate, there has been a great and rapid falling off in the trade of the Atlantic ports, only explicable on this assumption, as shown by official returns, and embodied in the following table, which refers to the entries at the ports of Omoa and Truxillo:

Years.	Vessels.	Tonnage.	Value of Cargoes.
1854.	202	15,852	\$635,594
1855.	173	10,950	474,536
1856.	142	8,320	294,255

The imports of the state at large may be estimated at not far from \$750,000, chiefly from Great Britain.*

* “It is evident that while the importing trade by the Bay of Fonseca continues on the increase, the customs revenues at the ports of Omoa and Truxillo must perforce diminish in an inverse proportion. The government, doubtless, fully alive to the evils which, in a financial point of view, the diminution of this revenue—by far the most productive—must bring forth, now seek to counteract this increase of the Pacific trade by holding out some inducement to importers by the Atlantic; and, accordingly, a legislative decree was passed in April, 1857, providing that the payment of the duties at the Atlantic custom-houses should henceforth be made one half in cash and the other half in paper money, instead of three fourths in cash and one fourth in government bonds, as it had been before. But the superiority of the Pacific route is too apparent to be affected in the least by this decree, now that merchants have become alive to its advantages, and therefore the probable consequences will be that, when the present contract for the customs has expired, the government will at once see the importance and expediency of taking this revenue into their own hands, in which case one of the causes which at present fetter the development of trade will be removed.”—*Report of British Consul in Honduras for 1857.*

The revenues of the state from all sources may be roughly estimated at \$250,000. The sale of *aguardiente*, or native rum, is a government *estanca* or monopoly, and yields a considerable annual income to the state.

The currency of Honduras has been much vitiated by the large issue of what is called "*moneda provisional*," or, familiarly, "*cobre*," i.e., copper coin slightly alloyed with silver, and of the denomination of quarter and half dollars. The issue has not at any time been limited by law, and has been going on since 1839, with a corresponding depreciation of value, until now it passes at the rate of twenty dollars of "*cobre*" for one of "*plata*" or silver. But, notwithstanding the laws upon the subject, made originally with the view of forcing this provisional money into circulation, it has always been rigidly excluded from the northern departments of Gracias, Yoro, and parts of Sta. Barbara and Olancho, where the people utterly refuse to receive it. It is difficult to say how much of this coin is in circulation, but it may be estimated at \$1,500,000 in nominal value, equal to \$750,000 in silver. It is but just to observe that the actual government of Honduras is making laudable efforts, by stopping the farther issue of this debased coin, and by a gradual annual redemption, to withdraw it from circulation, and to supply its place by an issue in denomination and standard conforming to that of the United States.

Apart from the "*moneda provisional*," the *macaco*, or cut money of the old kingdom, a portion of its coinage and that of the Federal Republic, together with American and English coin, make up the bulk of money in circulation. The foreign coins pass at their true valuation, and not, as in New Granada, Nicaragua,

and in some other of the South American States, at a nominal advance. As the exports of the state are fully equal to its imports, the little money which is in circulation remains in the state, to answer the limited requirements of its interior trade.

The cattle of Honduras constitute at present its most obvious source of wealth. The comparatively open character of the interior country, and its vast savannas, covered with natural and unfailing meadows, are circumstances eminently favorable for the increase of this kind of property to an indefinite extent; but, for obvious reasons, cattle do not now afford any considerable revenue to the proprietors, since the domestic consumption is small, and the demand in the neighboring states limited in amount. Mr. Bailly has suggested the possibility of salting beef in the state, and making it an article of export to the West Indies and other markets, and there seems to be much reason in the suggestion. It may be objected that the high temperature of the country must prove an insuperable difficulty to the success of the experiment; but there are certainly many portions of the interior where the elevation, and consequently cool climate, must obviate this objection, even if it were well founded.

The entire industry of Honduras, it must be confessed, is at a very low ebb. This has been the natural consequence of the condition of the country, both before and after its independence, not less than of the composition of its people.

The narrow colonial system of Spain had the effect to keep many of her American possessions, and especially Central America, entirely excluded from intercourse with the rest of the world. None of the improvements in the arts or in agriculture, which else-

where were effecting gradual but total revolutions in the industry of nations, were permitted to reach that country. Trade was monopolized by the crown, which equally undertook to regulate the amount of production of the various articles for which these colonies were distinguished. A single example will illustrate the extent to which this jealous and oppressive policy was carried. Early in the eighteenth century, the cultivation of the grape had been introduced upon the northern coast of Honduras with so much success and promise as to attract the attention of the government of Spain, and lead it to fear that the colony might ultimately come to rival the mother country in the production of wine. Orders were consequently issued to the officers of the crown to destroy the vines, which orders were carried into execution. Since that period no farther attempts have been made to introduce the grape, but no doubt exists of the fact that it might be produced in the greatest abundance, and become an element of wealth to the state.

The internal troubles which followed the independence have left the country no opportunity to repair the errors of the previous colonial system, which had so effectually suppressed its industry, and prevented the development of its resources. These commotions deterred foreign enterprise from taking that direction, while they equally debarred the people themselves from making an effective use of the limited means at their own command for their own improvement.

A great and, until remedied, an insuperable obstacle to the development of Honduras, is the want of adequate means of internal communication. The roads, so called, are mere mule-paths, often conducted, to avoid large and rapid streams, over the steepest and

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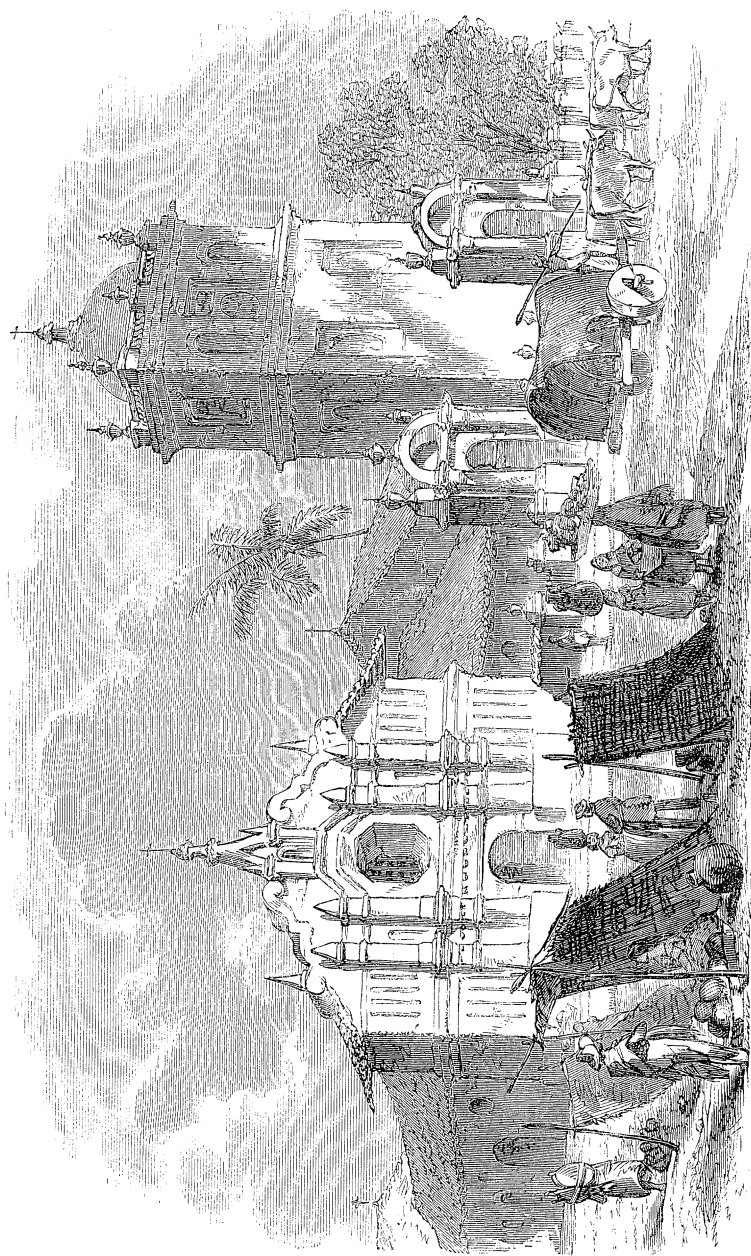
roughest mountains, where in places they are so narrow, abrupt, and obstructed, that the stranger recoils in despair of effecting a passage. The loads carried by mules are necessarily light, and the expense of transportation becomes so great as to effectually prohibit the exportation of the more bulky products of the state, except from places near the coast. All articles of importation, also, which can not be packed on mules, require to be transported on the shoulders of men; and the pianos, mirrors, and other foreign articles of bulk and value in use in the larger towns of the interior have all been carried in this manner from the seaports—distances varying from sixty to one hundred miles! The requisite machinery for working the mines in a manner adequate to their importance is also excluded for the same reason. But with the opening of a single good road through the state, and especially in the event of the construction of the proposed railway between the seas, these difficulties will be, in a great degree, removed, and industry increase in proportion to the incentive which may be held out for its exercise. The importance of these material considerations is well understood by all the educated portions of the people, and it is but just to say that they are disposed to make use of every means in their power, alike by the encouragement of foreign enterprise, and by an active co-operation on their own part, to hasten the development and secure the prosperity of the state. Liberal in politics and religion, and repelling those prejudices which it has been the effort of demagogues in Mexico and Guatemala to inspire against the United States, they look toward the latter country as the direction from whence their cherished hopes for the future are to be realized. As an evidence of their admiration for its

example, and with the view of opening new and more intimate relations with it, the government of Honduras in 1854 commissioned Don José Francisco Barrundia, one of its ablest and most venerated citizens, as envoy and plenipotentiary in the United States—a man who, as one of the most active promoters of the independence of Central America, the author of its Constitution, and at one time its president, was eminently fitted to give weight and character to his mission. His sudden death, on the eve of entering on the discharge of his duties, has justly been regarded in Honduras as a national calamity. There is, nevertheless, good reason to believe that the sentiments and principles which dictated his nomination are still cherished and active, and that the grand objects had in view in his appointment will ultimately be accomplished.

Civilization is harmonious; and there can be no great intellectual, political, or social advancement which is not preceded by a corresponding material progress. This truth has gradually forced itself upon the minds of the reflecting portion of the people of Central America, and they have come to understand that political permutations are powerless to effect the regeneration of the country. They distinctly perceive that the existing elements of population, however important in the aids which they may afford, are yet inadequate to that great end.

It has not always been prudent for them to avow their own convictions in the face of prejudices which are diligently fostered by demagogues for sinister and selfish purposes. The special power conferred upon the President by the Constitution of Honduras, “to conclude contracts for colonization,” nevertheless indicates the direction in which the framers of that instru-

ment looked for relief from the difficulties and dangers of their condition. As I have elsewhere intimated, it is only by a judicious system of colonization, which shall ultimately secure the predominance of white blood, at the same time that it shall introduce intelligence, industry, and skill, that the country can hope to achieve peace, prosperity, and greatness. With vast resources, a climate adapted to every caprice, not less than to the products of every zone, and an unrivaled position, it would be a practical denial of the evidences of high design to doubt the future power and greatness of the hitherto little known, the long-distracted, and, as yet, utterly undeveloped Republic of Honduras.



CATHEDRAL OF SAN MIGUEL, SAN SALVADOR.

SAN SALVADOR.

CHAPTER XV.

REPUBLIC OF SAN SALVADOR—GEOGRAPHICAL AND TOPOGRAPHICAL FEATURES—PRODUCTIONS, REVENUES, ETC.

THE State of San Salvador lies upon the Pacific Ocean, between the parallels of 13° and $14^{\circ} 10'$ N. latitude, and the meridians of 87° and 90° W. longitude. It has a coast-line of about one hundred and sixty miles, extending from the Bay of Fonseca to the River Paza, which divides it from Guatemala. Although the smallest of the Central American states, it has relatively the largest population, most industry, and the largest commerce.

SAN SALVADOR—CAPITAL, SAN SALVADOR.

Departments.	Capitals.	Population.
San Miguel	San Miguel	80,000
San Vicente	San Vicente	56,000
La Paz	Sacatecoluca	28,000
* Chalatenango	Chalatenango	75,000
* Suchitoto	Suchitoto	
San Salvador	San Salvador	80,000
* Sonsonate	Sonsonate	75,000
* Santa Ana	Santa Ana	
	Total	294,000

The area of the state is, approximately, nine thousand six hundred square miles, or one thousand and sixty-six square leagues,† nearly equal to that of Ver-

* Chalatenango and Suchitoto were formerly united in one department called Cuscatlan, and Santa Ana was embraced in Sonsonate.

† Mr. Baily estimates the area of this state at five hundred and seventy-seven square leagues, which is manifestly erroneous. He puts Chiquirin Point, the southeastern extremity of the state, in long. $87^{\circ} 42' W.$, and the Rio Paza in long. $89^{\circ} 50' W.$, while it is in long. $90^{\circ} 15' W.$, a difference of about twenty-five miles

mont, and somewhat greater than that of New Hampshire.

The topographical features of San Salvador are remarkable. The coast presents, for the most part, a belt of low, rich alluvial land, varying in width from ten to twenty miles. Back of this, and presenting an abrupt face seaward, rises what may be called a coast-range of mountains, or, rather, a broad plateau, which has an average elevation of about two thousand feet, and is relieved by numerous high volcanic peaks.

Between this range and the great primitive chain of the Cordilleras lies a broad valley, varying in width from twenty to thirty miles, and having a length of upward of one hundred miles. The coast plateau subsides generally toward this magnificent valley, which is drained by the great River Lempa, and is unsurpassed for beauty and fertility by any equal extent of country under the tropics. Its northern border rests upon the flank of the mountains of Honduras, which tower above it to the height of six or eight thousand feet, and is comparatively broken and rugged. To the south of the Lempa, however, the country rises from the immediate and proper valley of the river, first by a terrace with a very abrupt face, and afterward by a gradual slope to the summit of the plateau. This feature is illustrated in the physical section already presented facing p. 69. Another considerable basin, of great beauty and fertility, is formed by the system of small rivers which rise in the western parts of the state, around the feet of the volcano of Santa Anna, and fall into the sea near Son-

in the total length of the state. This is not the sole error. He calculates the coast-line of the state at forty-five to fifty leagues, which, on the assumption that the state has an area of five hundred and seventy-seven square leagues, would give but about eleven leagues of average width, which is palpably wrong. Its average width is upward of twenty leagues.

sonate. It forms a triangle, the base resting on the sea, and the apex defined by the volcano. Another and still larger basin is that of the Rio San Miguel, lying transversely to the valley of the Rio Lempa, in the eastern division of the state, and separated only by detached mountains from the Bay of Fonseca.

The mountain system of San Salvador, if its isolated volcanoes and volcanic groups can be called a system, is peculiar and interesting. Not less than eleven great volcanoes bristle along the crest of the plateau which I have described as intervening between the valley of the Lempa and the sea. They form nearly a right line from northwest to southeast, accurately coinciding with the great line of volcanic action, which is clearly defined from Mexico to Peru. Commencing on the side of Guatemala, they occur in the following order, viz., Apeneca, Santa Anna, Izalco, San Salvador, San Vicente, Usulután, Tecapa, Sacatecoluca, Chinameca, San Miguel, and Conchagua. There are also some others of less note, besides numerous extinct craters, sometimes filled with water, and various volcanic vents or orifices called "Infernillos." In the Bay of Fonseca the series is represented by the volcanic island peak of Tigre, and is resumed on the opposite shore by the memorable Coseguina, succeeded by El Viejo, Telica, Momotombo, and the other volcanoes of Nicaragua.

The Rio Lempa, considered under every point of view, is unquestionably the most important natural feature of San Salvador. In respect of size it ranks with the Motagua in Guatemala, and the Ulua and Segovia in Honduras. For a considerable part of its course it is a navigable stream, and therefore destined to become of great value in the development of the re-

sources of the state. It rises on the confines of Guatemala, at the foot of the high peak (sometimes called volcano) of Chingo, and flows in a southeast direction, through the great basin which I have described, for a distance of more than one hundred miles, when it turns abruptly to the south, and, breaking through the coast-range, finds its way, a distance of fifty miles farther, to the sea. Its mouth, according to the Conde de Güeydon (who visited this coast in command of the French brig-of-war "Genio" in 1847), is in lat. $13^{\circ} 12' 30''$ N., and long. $91^{\circ} 1'$ W. from Paris, equivalent to $88^{\circ} 41'$ W. from Greenwich.

The Lempa receives several considerable tributaries from the north, the principal of which are the Sumpul, Guarajambala, and Torola. The Sumpul rises on the confines of Guatemala, near Esquipulas, and flows on a course nearly parallel with the Lempa for upward of ninety miles before joining the latter. Throughout its length it constitutes the boundary between the states of Honduras and San Salvador.* It flows, for the most part, among high mountains, in a narrow valley, affording but little room for cultivation. The Torola is a much smaller stream, rising in the Mountains of San Juan, in Honduras, and flowing southwest into the Lempa. For the greater part of its course, in common with the Sumpul, it divides the two states above named. It collects its waters in a section of country remarkable for its mineral wealth. The tributaries of the Lempa from the south are, the outlet of Lake Guija, Rio Quesalapa, rising near the city of San

* Mr. Baily, in his Map of Central America, makes the Lempa proper the boundary between Honduras and San Salvador, whereas, for nearly the whole of its course, it flows through the very centre of the latter state. It forms the boundary between these states for only a very few miles, from the mouth of the Sumpul to that of the Torola.

Salvador, the Titiguapa, and Acajuapa, rising near San Vicente, all comparatively small streams.

I crossed the Lempa at two points; the first more than a hundred miles above its mouth, near the city of Suchitoto, and the second about thirty miles above its mouth, on the *camino réal* between the cities of San Vicente and San Miguel. The time of my crossing at Suchitoto was the latter part of July, 1853, or about the middle of the rainy season. The river at that point was then not less than one hundred and thirty yards broad, deep, and so rapid that the mules swam across with difficulty. The banks, although only of moderate height, are here seldom if ever overflowed, and, from the various indications on the shore, I should estimate the greatest rise of water during the floods at not more than from fifteen to eighteen feet.

At the second point, where I crossed it (called "La Barca") on the first of September, 1853, it is a magnificent stream, upward of two hundred yards in width, and flowing with a strong, deep current. The country on both sides is flat, but elevated from fifteen to twenty-five feet above the water at its average stage. The houses at the crossing I computed to be twenty-one feet above the water in the river, which was then high, and probably not less than five feet above its average stage. Yet, during the great rain or *Temporal* of October, 1852, the water rose two and an eighth Spanish varas in the houses, equal to *twenty-eight feet* above the stage marked at the time of my visit, or not far from *thirty-five feet* above ordinary or average stage! The whole surrounding country was overflowed, and the people at the ferry carried the large barges in which they escaped upward of six miles inland. This rise, however, was unprecedented, and the

result of heavy rains such as had never before been known in the country.*

The river was examined about three miles above "La Barca," by order of the government of San Salvador, in 1852, with a view to the erection of a suspension bridge. The point selected was one where the stream is compressed by high banks. The width here was found to be one hundred and fifty-two *varas*, and the depths, measured at intervals of ten yards, were as follows, in feet, commencing at the left shore, viz., 6, 10, 12, 15, 14, 12, 11, 10, 9, 7, 6, 5, 4, 4, 3½, 3, which gives an average depth of nine feet at ordinary stages of the water. Assuming a current of three and a half miles per hour—and it is probably greater—we find the river at this point, and at low stage, discharging 1,227,150 cubic feet of water per minute.

From these data it results that, unless obstructed by shallows and falls, the Lempa must be navigable for steamers of light draught for nearly one hundred miles above its mouth. I did not learn of the existence of any such obstacles, and, although the current is strong, I think the river is available for steamers such as are in constant use on our Western waters. At present it is little used, owing to the difficulty, if not impossibility, of ascending the river in boats proper for commercial purposes without the aid of steam.

The mouth of the Lempa is obstructed by a bad bar, carrying but six feet of water, but the estero of Jaltepeque approaches to within a league of the river, which, in fact, is connected with it by a natural canal,

* An account of this sudden rise of the river at this point was written at the time of its occurrence by Señor Don José Maria Cacho, and published in "*El Siglo de San Salvador*," Nov. 5, 1852. Señor Cacho was detained at the huts of La Barca during the flood. From his account, the river must have risen not less than fifteen feet in a single night.

through which the water flows at high stage in the river. The land between the river and estero is low, and the two might be permanently connected by means of a new canal, or by deepening the channel which now exists. The Bay of Jiquilisco (Espiritu Santo) sends some considerable estuaries to within a short distance of the Lempa, if, indeed, they do not connect with it. Both Espiritu Santo, the port of which was named, in 1846, Puerto del Triunfo, and the port of La Concordia, have every necessary capacity for commercial purposes. The Count de Güeydon reported, in reference to the first named, that it is always easy for merchant vessels to pass the bar, since at low tide there is never less than twelve feet of water on it, and at high tide twenty-two feet.

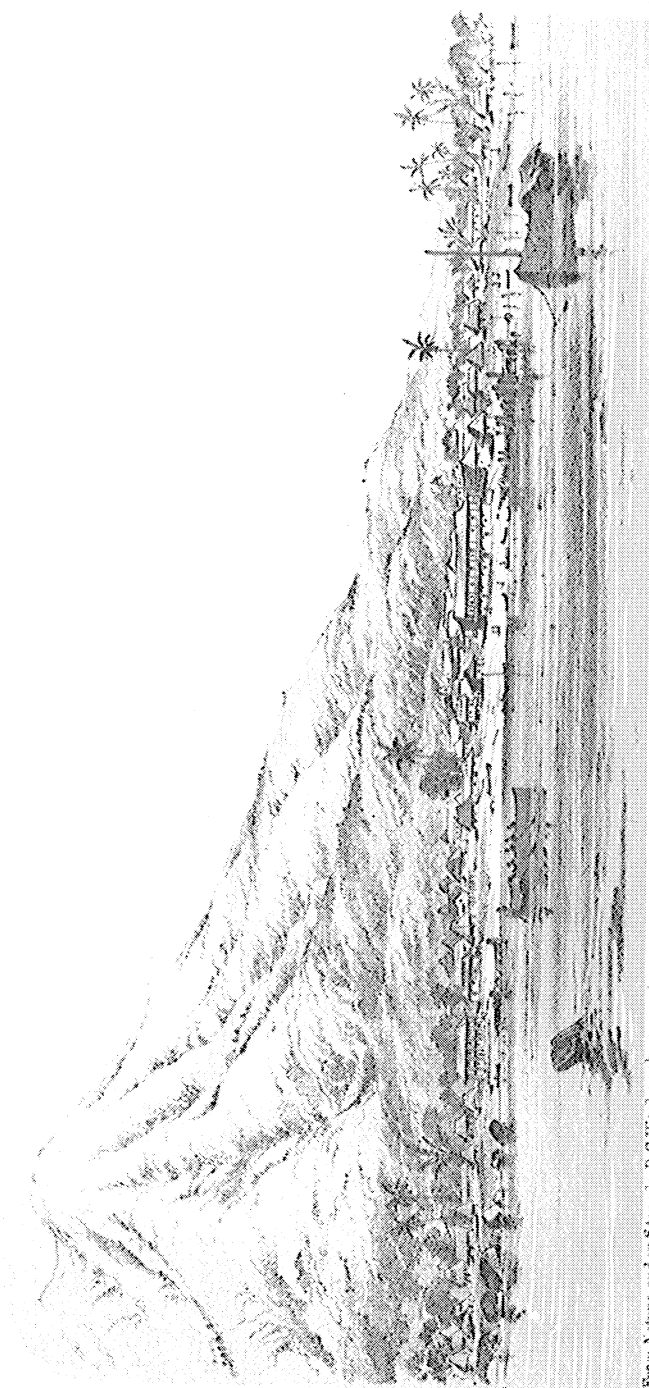
The Rio Paza (or Pazaca), separating San Salvador from Guatemala, and the Rio San Miguel, are the only remaining rivers of considerable size in San Salvador. The latter drains a considerable geographical basin, of great fertility, but for the most part low and unhealthy. In common with the Jiboa, Comolapa, and numerous other small streams flowing into the Pacific from the volcanic coast-range or plateau, these rivers take the form of estuaries in passing through the low country bordering the sea, and become navigable for small boats.

San Salvador has two considerable lakes, one in the northwestern part of the state, called Guija or Guijar, and another, very nearly in the centre of the state, named Ilopango or Cojutepeque. The former is said to be about fifteen miles in length by six in width. It receives several considerable streams, and discharges itself into the Rio Lempa, of which it may be regarded as one of the principal sources. It abounds with fish of good quality. There is a large island in this lake,

on which, according to Juarros, are some ancient ruins, called by the natives Zacualpa, *i. e.*, Old Town. Lake Ilopango is about twelve miles long by perhaps five in greatest width, and is clearly of volcanic origin. It seems to have been an ancient crater, and is surrounded on every side by high, abrupt hills, composed of scoria and volcanic stones. It receives no tributary streams, although it has a small outlet, flowing through a deep ravine into the Rio Jiboa, near the base of the volcano of San Vicente. The surface of the water is not less than twelve hundred feet below the general level of the surrounding country, which, as will be seen farther on, is wholly volcanic.*

In addition to these principal lakes, there are others of comparatively small size, which are simple extinct craters, or were caused by the subsidence of the earth during volcanic convulsions. They rarely have outlets, and the water which they contain is generally im-

* "Toward the southern shore, but at a considerable distance, there are three or four small islets, or rather rocks, a little above the surface of the water. In the lake there is very rarely a perceptible increase, but the depth is very great; and as there is no remembrance of its having been sounded at any period, the popular opinion of its being unfathomable has obtained implicit credence with the illiterate inhabitants of the adjacent towns. The water, when taken up, is beautifully pellucid, but it is not considered wholesome either for drinking or bathing, nor suitable for domestic purposes. When at rest, it reflects, in the same manner as the deep sea, the azure of a generally bright sky; but when the surface is ruffled by a breeze, it has the peculiarity of assuming a green color, of that tint which the common people designate, very appropriately, as *verde de perico* (parrot green), and exhaling a sulphurous odor, not slight, but powerful and sufficiently disagreeable, becoming more intense as the wind increases in strength. When the upper stratum of the water is thus moved, fish, *pepescos*, and *moharras* are taken in great quantities; at other times, when the lake is still, scarcely any can be caught. This fishery is a source of profit to the people of the neighboring towns, who are proprietors of different portions of the shores, the exclusive possession of which is secured to them by immemorial custom. The fish is of indifferent quality, yet much esteemed and praised by the inhabitants of San Salvador, because it is almost the only aliment of the kind they are acquainted with; for, although the city is no more than seven leagues from the ocean, sea-fish is very rarely brought to it."—*Baily*.



From Nature and on Stone by D. C. Hildcock

PORT OF L.A. UNION.

pregnated with saline substances to a degree to be unfit for use.

The principal ports of San Salvador are La Union, on the Bay of Fonseca, La Libertad, and Acajutla. The last two, however, are unprotected, and can only be regarded as roadsteads. They derive their importance from their proximity to the respective cities of San Salvador and Sonsonate. It sometimes happens that vessels are obliged to lie off the port of Acajutla for many days without being able to communicate with the shore; indeed, landing is at all times difficult, and frequently dangerous. It is, nevertheless, the port which was designated as the stopping-place of the galleons under the crown, and has still the extensive *bo-degas* or warehouses which were then erected. Efforts are now making to direct trade to the newly-established port of Concordia, by opening roads to connect it with the considerable town of San Vicente.* La Union, however, although situated at one extremity of the state, must continue to be its principal port, and must increase in importance with the development of the resources of the Bay of Fonseca. Although constituted a port at a comparatively recent period, it now receives the principal part of the imports of the state. Its situation, under the lee of the volcano of Conchagua, which shuts it off from the benefit of the sea-breezes, is unfavourable.

* This port is situated on the Pacific, about midway between the well-known ports of La Union and La Libertad, seven leagues from Sacatecoluca, ten from San Vicente, and fifteen from the city of San Salvador. Bo-degas, or store-houses, have been erected, a commandant appointed, and pilots qualified for the port. As an inducement to the opening of commerce at this point, the government has issued a decree to the effect that the first vessel which enters the port will be required to pay but one third of the regular duties and charges on vessel and cargo; the second but one half; the third but two thirds; the fourth but three fourths. The port may be entered without difficulty by vessels drawing twelve or thirteen feet. The date of the decree creating the port is August, 1853.

vorable to general health, and gives it a temperature higher than that of any other point on the entire bay. This circumstance has led to the discussion of the question of its removal to a point nearer to the entrance of the bay called Chiquirin, where the sea-breezes reach, and where the depth of water is such as to enable the largest vessels to lie close in shore. Until this change shall be effected, the tendency of things will be to concentrate commerce at the free port of Amapala, on the island of Tigre. The population of La Union may be estimated at about two thousand, irrespective of the inhabitants of the dependent Indian pueblo of Conchagua, situated about a league distant, on the flank of the volcano of the same name.

San Salvador, from its conformation of surface and the nature of its soil, is essentially an agricultural state. The basin of the River San Miguel, that of Sonsonate, and the valley proper of the Lempa, not less than the alluvions bordering on the Pacific, are of extraordinary fertility, and eminently adapted for the production of tropical staples. Around the Bay of Jiquilisco and the port of La Libertad, cotton has been cultivated with success; but up to this time, the principal products of the state have been, in the order of their importance, indigo, sugar, and maize. Indigo constitutes the chief article in the exports of the state, and enters most largely into its resources as an article of trade. The production, however, in consequence of the falling off in price since 1830, has materially diminished. At one time it amounted in quantity to not less than twelve thousand *ceroons* of one hundred and fifty pounds net each, and in value to not far from \$3,000,000. As has been observed by Mr. Baily, some idea of the extent of ground which must have been covered with the

plant may be formed from the fact that it takes, on the average, three hundred pounds of the plant to produce one pound of indigo. It is produced from an indigenous triennial plant, known by the Indian name of *Jiquilite* (*Indigofera Disperma*). This plant flourishes luxuriantly on nearly all kinds of soil. The land requires comparatively little preparation, being merely burned over and slightly plowed. The seed is then scattered broadcast. This is done in the months of February and April; and the growth of the plant is so rapid, that by the first of August it has attained a height of from five to six feet, and is fit for cutting. "On land freshly sown," says Baily, "the product of the first year is but moderate; the quality, however, is good. The strength of the crop is in the second year. The product of the first year is called *tinta nueva*; that of the second, *tinta retoño*. Experienced cultivators manage to have a portion of each description in each season. After the cutting, the stems and roots remain without signs of vegetation until the early part of the following year, when they shoot out again. The *retoño*, as being the most advanced, is first ready for cutting, as the *tinta nueva* seldom reaches the proper state before September. The manufacture of the indigo is then carried on daily until the whole crop is got in, and by the end of October or the beginning of November the produce is fit for market."

The manufacture of the indigo requires no very difficult nor expensive processes; but it must be cut promptly at the proper period, or else it becomes worthless. It is then necessary for the proprietors of estates to have a large and reliable supply of labor. The difficulty of obtaining this at such times, during political disturbances, when laborers seclude themselves as much

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as possible to escape conscription, has been one of the principal causes of the falling off of the production of this commodity. It is not easy to calculate the present product of indigo in the state; but as it constitutes about the only reliance of the merchants in paying for their imports, it can not fall much short of \$1,000,000 in value.

Sugar is widely produced in San Salvador, from petty *trapeches* or mills which are scattered all over the state. The largest quantities are manufactured in the vicinity of the town of Santa Anna. It is of excellent quality, the crystals being remarkably large and hard.*

Cacao was anciently produced in the neighborhood of Sonsonate and San Vicente in great abundance, but its cultivation is now insignificant. "Coffee," observes Mr. Baily, "is another article which might become of great agricultural importance in San Salvador. There are many localities favorable to its growth about Ahuachapam, Santa Anna, San Salvador, Sonsonate, and San Vicente. In the first three places it grows kindly, and there are some thriving plantations that yield fruit of good quality; but the home consumption being small as yet, though gradually increasing, they are not looked to as a source of much profit.

Tobacco of good quality, but only in amounts necessary for home consumption, is produced in various parts of the state. That grown in the neighborhood of the towns of Tepetitán and Istepec is most valued.

The geological conditions of San Salvador, as may

* "Sugar and raspadura (candy) have much increased in production, and the distilling of rum to an extraordinary extent, in the neighborhood of Sonsonate, by the opening of the California market. Vessels now find at Acajutla an ample supply of these articles, ready packed for mule carriage: the rum in small fourteen and fifteen gallon casks, and gray-beards of from three to six gallons, suitable for easy transport at the diggings or to places in the gold regions."—*Baily's Central America*, p. 89.

be inferred from the physical facts already presented, preclude the existence of the precious metals, except in those portions of the state directly dependent on the primitive range of the Cordilleras, or, rather, on the mountain system of Honduras. The silver mines of Tabanco, Sociedad, and others, in their immediate vicinity, lying in the northeastern part of the state, in the Department of San Miguel, on the confines of Honduras, have nevertheless a wide celebrity. They have been extensively worked, with very profitable results. Two leagues from Tabanco are the gold mines of Capetillas, of great richness. The group of silver mines known under the general name of "Minas de Tabanco," hold the silver in combination with galena and sulphuret of zinc. They are easily worked, and yield from forty-seven to two thousand five hundred and thirty-seven ounces to the ton. The particular mine called Santa Rosalia is richest, and gives the maximum yield here stated. A considerable part of its ores are shipped direct to England. An attempt was made about the year 1830 to work these mines on a large scale by an English company, which sent out a large corps of Cornish miners for the purpose. The machinery sent out at the same time was nevertheless so heavy that it was found impossible to transport it from the coast, which difficulty, in conjunction with others, entirely broke up the enterprise. Nevertheless, with the construction of proper roads, whereby modern improvements in mining with the requisite machinery could be introduced, there is no doubt that these mines could be made of great value, both to their owners and to the state. Their proximity to the Bay of Fonseca is favorable to their complete development.*

* "Five leagues north of San Miguel are a number of mines of silver. Among

"Near the village of Petapa," says Dunlop, "nine leagues from Santa Anna, are some rich mines of iron, which produce a purer and more malleable metal than any imported from Europe. The ore is found near the surface, and is very abundant; and there are extensive forests in the immediate vicinity, which serve for making charcoal." But the amount of iron manufactured is not equal to the consumption of the state, not exceeding seven hundred tons per annum. It is worth about \$10 the 100 lbs., or \$200 per ton! Were these mines worked properly, the enterprise could not fail to be a profitable one to all employed. Mr. Bailly assures us that some of this iron, sent to England a few years ago for the purpose of examination, proved to be a "very valuable variety for conversion into fine steel, approaching in this respect very nearly to the celebrated *wootz* of India."

Among the many undeveloped resources of San Salvador, and one which may perhaps come to have a first value in the state, is its coal, of which there is reason for believing vast beds exist throughout the valley of the Rio Lempa, and in the valleys of some of its principal tributaries, over a region of country one hundred miles long by not far from twenty miles broad. Coal had long been reported to exist in the state, previously to my visit in 1853. The investigations which were

them is one called La Carolina, which was worked by a Spanish *empresario* about thirty years ago. He invested his own property, borrowed \$100,000, and, after getting his mine in order, in less than six months was able to pay his obligations, and, although he died before the end of the year, he left \$70,000 in gold and silver, the produce of the mine. After his death the ownership was disputed, the works fell into ruins, and the mine became filled with water, in which condition it remains. The mines of Tabanco were more celebrated than those in this vicinity, and when worked, yielded upward of \$1,000,000 annually (?), although worked in a rude manner without machinery. The principal one once yielded \$200,000 annually to the proprietors."—*Dunlop's Travels in Central America*, p. 277.

then made, under my directions, may, however, be regarded as having put the question at rest. Coal was found at a number of places in the valley of the Rio Titiguapa, flowing into the Lempa from the west, of good quality, proper geological conditions, and with every indication of abundance. This river, it may be observed, is navigable for seven months in the year. The coal occurs about two leagues above its junction with the Lempa; also in the valley of the Rio Torola, about three leagues from its junction with the Lempa, of good quality, apparently abundant, and having all the geological conditions perfect. Near the town of Ilobasco, close to the Rio Lempa, it is reported to exist in large beds, and to have been used for many years by the village smiths.

The coal of San Salvador is all of the variety called *brown coal*, and is a later formation than what is known as *pit coal*. In Germany it is found in vast deposits in Croatia, Moravia, Bohemia, Tyrol, Saxony, Silesia, etc., and it is worthy of remark, that all the coal which has been found south of the Mississippi Valley, in Mexico, Central America, New Granada, Chili, etc., appears to be of this variety. In the county of Mansfeldt, in Germany, the brown coal is used for toughening copper, and for melting the white metal for the blue metal in reverberating furnaces. All the steam-engines in the above-named German coal districts are fed with this coal. It can be used for refining lead and silver, for the calcination of ores, and generally for all the operations performed in reverberatory furnaces. Trials which have hitherto been made to coke it, for use in blast furnaces, have not been successful. I am not aware that its use has ever been attempted for locomotives and steam-ships. This is not remark-

able, as it has hitherto been found where no opportunity has existed of submitting it to this kind of trial. That found in the valley of the Rio Titiguapa, already alluded to, has a specific gravity of 1.57; ashes 10.5 per cent.* It is of that peculiar kind of brown coal called *pitch coal*, and is rich in bitumen.

That part of the coast of San Salvador extending from Acajutla to La Libertad is termed "Costa del Balsimo," from the circumstance of producing what is known in the materia medica as "balsam of Peru." Lying to the seaward of the volcanic coast-range of mountains which I have described, the whole tract is much broken by the spurs and ranges of hills which the latter sends down toward the sea, and so thickly covered with forests that it is difficult, if not impossible, to penetrate it on horseback. It is exclusively occupied by Indians, who, as it will appear farther on, are little altered from their primitive condition. They support themselves by the produce of the balsam-trees, and by hewing out cedar planks and scantling, which they carry on their shoulders to Sonsonate and San Salvador. Their chief wealth, however, is the balsam, of which they collect annually about twenty thousand pounds, which is sold to dealers in the cities at an average price of half a dollar per pound. "The trees yielding this commodity," according to Baily, "are very numerous on the privileged spot, and apparently limited to it; for on other parts of the coast, seemingly identical in climate, rarely an individual of the species is to be met with. The balsam is obtained by making an incision in the tree, whence it gradually exudes,

* This result compares favorably with that of the analysis of the best varieties of American bituminous coals. The Virginia bituminous coal leaves 10.7 per cent. of ashes; the Pennsylvania free-burning coal 13.3 per cent.; the Maryland bituminous (Cumberland), 10 per cent.

and is absorbed by pieces of cotton rag inserted for the purpose. These, when thoroughly saturated, are replaced by others, which, as they are removed, are thrown into boiling water. The heat detaches the balsam from the cotton, and, being of less specific gravity than the water, it floats on the top, is skimmed off, and put in calabashes for sale. The wood of the tree is of close grain, handsomely veined, nearly of a mahogany color, but redder. It retains for a long time an agreeable, fragrant odor, and takes a fine polish. It would be excellent for cabinet-work, but can seldom be obtained, as the trees are never felled until by age or accidental decay their precious sap becomes exhausted. This balsam was long erroneously supposed to be a production of South America; for in the early periods of the Spanish dominion, and by the commercial regulations then existing relative to the fruits of this coast, it was usually sent by the merchants here to Callao, and, being thence transmitted to Spain, it there received the name of 'balsam of Peru,' being deemed indigenous to that country. The real place of its origin was known only to a few mercantile men."

As I have said, the volcanic features of San Salvador are both numerous and striking. Only two of the eleven great volcanoes of the state are what are called "vivo," alive or active, viz., San Miguel and Izalco. The first-named rises sheer from the plain to the height of six thousand feet, in the form of a regular truncated cone. It emits constantly great volumes of smoke from its summit, but its eruptions have been confined, since the historical period, to the opening of great fissures in its sides, from which have flowed currents of lava, reaching, in some instances, for a number of miles. The last eruption of this kind occurred in 1848, but it resulted in no serious damage.

It is difficult to conceive a grander natural object than this volcano. Its base is shrouded in densest green, blending with the lighter hues of the grasses which succeed the forest. Above these the various colors melt imperceptibly into each other. First comes the rich umber of the scoriæ, and then the silver tint of the newly-fallen ashes at the summit; and still above all, floating in heavy opalescent volumes, or rising like a plume to heaven, is the smoke, which rolls up eternally from its incandescent depths.

The volcano of Izalco may, however, be regarded as the most interesting volcanic feature of the state. This volcano and that of Jorullo, in Mexico, described by Humboldt, are, I believe, the only ones which have originated on this continent since the discovery. It arose from the plain, near the great mass of the extinct volcano of Santa Anna, in 1770, and covers what was then a fine cattle hacienda or estate. About the close of 1769 the dwellers on this estate were alarmed by subterranean noises and shocks of earthquakes, which continued to increase in loudness and strength until the twenty-third of February following, when the earth opened about half a mile from the dwellings on the estate, sending out lava, accompanied by fire and smoke. The inhabitants fled, but the *vaqueros* or herdsmen, who visited the estate daily, reported a constant increase in the smoke and flame, and that the ejection of lava was at times suspended, and vast quantities of ashes, cinders, and stones sent out instead, forming an increasing cone around the vent or crater. This process was repeated for a long period, but for many years the volcano has thrown out no lava. It has, however, remained in a state of constant eruption, and received, in consequence, the designation of "El

Faro del Salvador," the Light-house of Salvador. Its explosions occur with great regularity, at intervals of from ten to twenty minutes, with a noise like the discharge of a park of artillery, accompanied with a dense smoke, and a cloud of ashes and stones, which fall upon every side, and add to the height of the cone, which is now about twenty-five hundred feet in altitude.

The volcanoes of San Vicente and Tecapa have several orifices or vents, emitting smoke, steam, and sulphurous vapors, which are called "*Infernillos*," literally, "Little Hells." In a word, it may be said, with truth, that San Salvador comprehends more volcanoes, and has within its limits more marked results of volcanic action, than probably any other equal extent of the earth. For days the traveler within its borders journeys over unbroken beds of lava, scoriæ, and volcanic sand, constituting, contrary to what most people would suppose, a soil of unbounded fertility, and densely covered with vegetation.

There are also many extinct craters, which are now generally filled with water, constituting lakes without outlets, and of which the water is brackish. One of these, called "Joya," occurs about four miles to the southwest of the city of San Salvador.

Near the town of Ahuachapan, in the extreme western part of the state, are some remarkable thermal or hot springs, called *ausoles*, "emitting a dense white steam from a semi-fluid mass of mud and water in a state of ebullition, continually throwing large, heavy bubbles to the surface." These *ausoles* are described by Montgomery in his Narrative as follows:

"Of these lakes or ponds there are several, and they occupy a considerable tract of land. The largest is about a hundred

yards in circumference. In this, as in all the others, the water, which was extremely turbid, and of a light brown color, was boiling furiously, and rising in bubbles three or four feet high. The steam ascended in a dense white cloud, and spread for a considerable distance round, as I stood for some time on the bank of this natural caldron, gazing with awe upon its tremendous vortex. The heat was so great on the surface of the ground near the borders of the lakes that, had our feet not been protected with thick shoes, it could not have been endured. On thrusting a knife into the ground, the blade, when drawn out after a few seconds, was so hot as to burn the fingers. Our horses, which, according to the custom of the country, were not shod, exhibited such symptoms of uneasiness, owing to the state of the ground beneath them, or in consequence of the strong smell of the steam, that it was found necessary to leave them tied some distance from the scene. In some places a little column of smoke issued fiercely from a hole in the ground, while in others, the water, in a boiling state, gushed out like a fountain. The ebullitions of these lakes or springs have formed on the borders of them a deposit of the finest clay, and of every variety of colors; but it does not appear that the natives have profited by the facility thus afforded them for the manufacture of pottery; and although nothing would be more easy than to establish there the finest mineral baths in the world, this object has never occupied their attention."

But, notwithstanding its numerous volcanic features, San Salvador has suffered less from earthquakes than either Costa Rica or Guatemala. The greatest catastrophe that has befallen the state from this cause occurred last year (April, 1854), when the capital of the state was utterly destroyed by a violent earthquake. Previous to this event, the city of San Salvador, in point of size and importance, ranked third in Central America; Guatemala, in the state of the same name, being first, and Leon, in Nicaragua, second. It was founded in 1528 by George Alvarado, brother of the

renowned Pedro Alvarado, the next in command to Cortez in his conquest of Mexico, and afterward the conqueror and governor of Guatemala. Its foundations were first laid at a place now called Bermuda, about six leagues to the northward of the present site. In 1539 it was removed to the place which it occupied until the period of the recent catastrophe. Its name was given to it by Alvarado in commemoration of his final decisive victory over the Indians of Cuscatlan, which was gained on the eve of the festival of San Salvador.

During the dominion of Spain in America the city was the seat of the governor intendente of the province of San Salvador, dependent on the captain-generalcy of Guatemala. After the independence it became the capital of the state, and was early distinguished for its thorough devotion to the principles of the liberal party in Central America.

After the confederation of the states it was selected as the capital of the new republic, and a district was laid off around it, called the Federal District, after the example of the United States in erecting the District of Columbia. It continued to be the seat of the federal government until the dissolution of the republic in 1839.

I spent the month of August, 1853, in the city of San Salvador, and was much impressed with the great beauty of the town, and the general intelligence, industry, and enterprise of its inhabitants, who surpass, in these respects, the people of any of the other large towns of Central America. The position of the town was remarkably beautiful; in the midst of a broad, elevated plain, on the summit of the high table-land or coast-range of mountains which intervenes between the

valley of the River Lempa and the Pacific. Its elevation, by barometrical admeasurement, is two thousand one hundred and fifteen feet above the sea. As a consequence, its climate is cool as compared with that of the coast alluvions, although unfavorably modified in this respect by a low range of hills on the southern border of the plain, which shuts off the sea-breeze. Were it not for this obstacle, the breezes of the ocean, which is only twenty miles distant, would reach the city. During the month of August, 1853, the maximum of temperature was 81° of Fahr., the minimum 70° , and the mean average $76^{\circ} 3'$, which constitutes a delicious climate.

The hills around the plain of San Salvador are covered with verdure, which, as the dews are considerable, keeps green throughout the dry as well as the rainy season. About three miles to the westward of the city is the great volcano of San Salvador. The cone, which rises on the northern border or edge of the crater, is (approximately) eight thousand feet in height. The volcano proper, however, is a vast mass, with a broad base of irregular outline, its summit serrated by the jagged edges of the crater, and is much less in altitude than the cone. This cone seems to have been formed by ashes and scorix thrown out of the crater, which is represented as a league and a half in circumference, and a thousand *varas*, or nearly three thousand feet, deep. At the bottom of this crater is a considerable lake of water. Very few persons have had the temerity to venture into the chasm of the volcano, and none of these are likely, judging from the accounts which they give of their efforts, to repeat the undertaking. Two Frenchmen, who ventured down a year or two since, became exhausted and incapable of returning.

They were rescued with great difficulty by a detachment of soldiers from the garrison.

San Salvador stands, or rather stood—for its destruction has been so complete as to justify the use of the past tense—upon a table-land wholly made up of scoriæ, volcanic ashes, sand, and fragments of pumice, overlying, to the depth of hundreds of feet, the beds of lava which had flowed from the volcano before their ejection. Those who have seen the scoriaceous beds which cover Pompeii can form an accurate idea of the soil on which San Salvador was built.

The channels of the streams are worn down to a great depth through this light and yielding material, and constitute immense ravines, which render the approaches to the town almost impassable, except at the places where graded passages are cut down on either side, paved with stone, and sometimes walled, to keep them from washing out and becoming useless. Some of these approaches are so narrow that it is customary, when mounted, to shout loudly on entering, so as to avoid encountering horsemen in the passages, which are frequently so restricted as to preclude either passing or turning back. San Salvador has more than once owed its safety, in time of war, to these natural fortifications, which confounded the enemy with their intricacies and difficulties, while affording means of defense to the inhabitants.

The facility with which the soil above described washes away has been the cause of several disasters to San Salvador. During a heavy rain of several days' duration, called a "*Temporal*," which occurred in 1852, not only were all the bridges which crossed a small stream flowing through one of the suburbs of the town undermined and ruined, but many houses destroyed in

the same manner. One of the principal streets, extending into the suburbs, began to wash at its lower extremity, and the excavation went on so rapidly that no effort could arrest it. A considerable part of the street became converted into a huge ravine, into which the houses and gardens on either side were precipitated. The extension of the damage was guarded against, when the rains ceased, by the construction of heavy walls of masonry, like the faces of a fortification. How serious an undertaking this was regarded may be inferred from the fact that its completion was deemed of sufficient importance to be announced in the annual message of the President.

San Salvador, like all other Spanish towns, covered a large area in proportion to its population. The houses were built low, none being of more than one story, with very thick walls, designed to resist the shocks of earthquakes. Each was built around an inner court, planted with trees and flowers, and frequently containing a fountain. To the circumstance of the existence of these courts the people of San Salvador owe their general preservation in the late catastrophe, as will be seen from the accounts below given. They afforded ready and secure places of refuge from the falling dwellings.

The population of San Salvador was estimated in 1852 at twenty-five thousand. Including the little towns in its environs, and which were practically a part of it, such as Soyopango, San Marcos, Mexicanos, etc., its inhabitants might have been estimated at thirty thousand. It was the seat of a bishopric, with a large and beautiful cathedral church, and of a large and flourishing university, the buildings for which were only finished about a year ago. It had also a female semina-

ry, several hospitals, and numbered some eight or ten churches. In 1852, a very large and beautiful cemetery, with a fine façade and dependent chapels, was constructed. Two aqueducts, one of which is five miles in length, supplied the city with water. It was also a place of considerable and improving trade. Under the auspices of the late president, Dueñas, a cart-road was surveyed, and carried nearly, if not quite, to a successful conclusion, from the city to its port on the Pacific, called *La Libertad*, a distance of about twenty-two miles. This, in a country where the best roads are hardly equal to what we would here call cattle-paths, was certainly no inconsiderable advance.

The market of San Salvador was well supplied from the numerous Indian villages around it. On feast-days, and on the occasions of the fairs, such as that falling on the anniversary of the victory of Alvarado, the town overflowed, not only with people gathered from within a radius of fifty leagues, but with foreigners and merchants from every part of Central America. At these fairs the accounts between dealers were adjusted, and contracts, sales, and purchases made for the ensuing year; the whole concurrence and bustle contrasting strangely with the usual monotony and quiet.

With the exception of the central and paved part of the city, San Salvador was eminently sylvan, being literally embowered in tropical fruit-trees. The red-roofed dwellings, closely shut in with evergreen hedges of cactus, shadowed over by palm and orange-trees, with a dense background of broad-leaved plantains, almost sinking beneath their heavy clusters of golden fruit, were singularly picturesque and beautiful. In recalling the picture, it is sad to think that all is now abandoned and desolate; that the great square is deserted,

and that a silence, unbroken even by the fall of water from the lately glittering fountains, reigns over the ruined and deserted, but once busy and beautiful city of "Our Saviour!"

It will be seen from the following account of the catastrophe of April 16th, that the work of devastation was accomplished in the brief space of ten seconds. Fortunately, a premonitory shock had induced the wary inhabitants to abandon their houses, and seek safety in the public squares and in the court-yards of their dwellings. Had it not been for this, the loss of life would, of necessity, have been very great.

San Salvador has suffered greatly in past times from earthquakes. Severe ones are recorded as having occurred in the years 1575, 1593, 1625, 1656, and 1798. Another, which occurred in 1839, shattered the city, and led the people to think of abandoning it. The volcano has also several times thrown out sand, and threatened general devastation.

But none of the earthquakes alluded to were comparable in violence with that now recorded. It will be seen that the event has inspired so profound a terror, that the people do not propose to return again to the same site, but to select a new locality for their capital. In this they follow the example of the people of Guatemala, which city was originally built at a place now called the Antigua, or Old City. In 1773 an earthquake occurred of such power as nearly to ruin the town, which was removed in consequence. It may be doubted if the earthquake of that year was as violent as that which ruined San Salvador, and which in that respect may be compared with that which destroyed Caraccas in 1812, and in which ten thousand lives were lost. The earthquake of Caraccas consisted of three

terrific shocks, each one lasting but two or three seconds. The shocks which destroyed San Salvador did not collectively extend over ten seconds.

The subjoined account of the destruction of the city is from the "*Boletín Extraordinario del Gobierno del Salvador*" of May 2d, 1854, and may be recorded as authentic:

"The night of the 16th of April, 1854, will ever be one of sad and bitter memory for the people of Salvador. On that unfortunate night, our happy and beautiful capital was made a heap of ruins. Movements of the earth were felt on the morning of Holy Thursday, preceded by sounds like the rolling of heavy artillery over pavements, and like distant thunder. The people were a little alarmed in consequence of this phenomenon, but it did not prevent them from meeting in the churches to celebrate the solemnities of the day. On Saturday all was quiet, and confidence was restored. The people of the neighborhood assembled as usual to celebrate the Passover. The night of Saturday was tranquil, as was also the whole of Sunday. The heat, it is true, was considerable, but the atmosphere was calm and serene. For the first three hours of the evening nothing unusual occurred, but at half past nine a severe shock of an earthquake, occurring without the usual preliminary noises, alarmed the whole city. Many families left their houses and made encampments in the public squares, while others prepared to pass the night in their respective court-yards.

"Finally, at ten minutes to eleven, without premonition of any kind, the earth began to heave and tremble with such fearful force that in ten seconds the entire city was prostrated. The crashing of houses and churches stunned the ears of the terrified inhabitants, while a cloud of dust from the falling ruins enveloped them in a pall of impenetrable darkness. Not a drop of water could be got to relieve the half-choked and suffocating, for the wells and fountains were filled up or made dry. The clock tower of the cathedral carried a great part of that edifice with it in its fall. The towers of the church of San Francisco crushed the episcopal oratory and part of the palace. The church of

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Santo Domingo was buried beneath its towers, and the college of the Assumption was entirely ruined. The new and beautiful edifice of the University was demolished. The church of the Merced separated in the centre, and its walls fell outward to the ground. Of the private houses a few were left standing, but all were rendered uninhabitable. It is worthy of remark that the walls left standing are old ones; all those of modern construction have fallen. The public edifices of the government and city shared the common destruction.

“The devastation was effected, as we have said, in the first ten seconds; for, although the succeeding shocks were tremendous, and accompanied by fearful rumblings beneath our feet, they had comparatively trifling results, for the reason that the first had left but little for their ravages.

“Solemn and terrible was the picture presented on the dark, funereal night, of a whole people clustering in the plazas, and on their knees crying with loud voices to Heaven for mercy, or in agonizing accents calling for their children and friends, which they believed to be buried beneath the ruins! A heaven opaque and ominous; a movement of the earth rapid and unequal, causing a terror indescribable; an intense sulphurous odor filling the atmosphere, and indicating an approaching eruption of the volcano; streets filled with ruins, or overhung by threatening walls; a suffocating cloud of dust, almost rendering respiration impossible—such was the spectacle presented by the unhappy city on that memorable and awful night!

“A hundred boys were shut up in the college, many invalids crowded the hospitals, and the barracks were full of soldiers. The sense of the catastrophe which must have befallen them gave poignancy to the first moments of reflection after the earthquake was over. It was believed that at least a fourth part of the inhabitants had been buried beneath the ruins. The members of the government, however, hastened to ascertain, as far as practicable, the extent of the catastrophe, and to quiet the public mind. It was found that the loss of life had been much less than was supposed, and it now appears probable that the number of the killed will not exceed one hundred, and of wounded fifty. Among the latter is the bishop, who received a severe

blow on the head; the late president, Señor Dueñas; a daughter of the president, and the wife of the secretary of the Legislative Chambers, the latter severely.

“Fortunately, the earthquake has not been followed by rains, which gives an opportunity to disinter the public archives, as also many of the valuables contained in the dwellings of the citizens.

“The movements of the earth still continue, with strong shocks, and the people, fearing a general swallowing up of the site of the city, or that it may be buried under some sudden eruption of the volcano, are hastening away, taking with them their household gods, the sweet memories of their infancy, and their domestic animals, perhaps the only property left for the support of their families, exclaiming with Virgil, ‘*Nos patriæ fines et dulcia linquimus arva.*’ ”

The revenues of San Salvador are derived from duties on imports, and the proceeds of the government monopolies of tobacco and *aguardiente* (rum). The receipts of the state from all sources, and its expenditures, for five years, are reported by the treasury as follows, the fiscal year commencing October 1st, and terminating September 30th:

Years.	Receipts.	Expenditures.
1848-49	\$397,405	\$384,227
1849-50	353,127	342,453
1850-51	402,619	385,836
1851-52	454,113	415,207
1853-54	600,188	579,460
1854-55	479,200	486,582
1855-56	721,416	658,037

The receipts for the fiscal year 1856 were augmented by voluntary and forced loans for military purposes by the sum of \$175,419. The receipts from ordinary sources were \$545,996, of which \$211,518 were derived from duties on importations (against \$251,136 in 1856), and \$171,924 from the monopoly of *aguar-*

diente. The expenditures on account of the army were \$138,084 (against \$41,938 in 1856); public debt, \$160,314; civil list, \$79,000. From October 1, 1851, to the same date, 1857, treasury bonds (*vales* or *bonos*) had been issued to the amount of \$1,848,841, of which \$1,347,727 had been redeemed, leaving \$501,114 in circulation. These "bonos" are classified, and received at fixed valuations, and in certain proportions, in payment of duties and other obligations to the state. Their valuation is wholly arbitrary, and is determined by legislative enactment, ranging from ten to eighty per cent. on their face. They have mostly, if not entirely, originated in the political disturbances of the country, having been issued on account of the forced loans from proprietors, or in the way of compensation for property taken for public purposes, and probably do not represent more than one third of the original value on account of which they were issued.

The foreign debt of the state on the first day of January, 1853, amounted to not far from \$325,000, of which the greater part was the proportion of the debt of the old federation assumed by San Salvador. This has been augmented by various claims, made mostly, if not exclusively, by British subjects, and which, in the aggregate, have amounted to about \$100,000. The interest on the old debt has not, I believe, been paid, and its accumulation since 1848 is probably chargeable upon the state. The report of the treasury for 1852 puts down \$18,205 as paid on account of debts due to individual foreigners. For 1851 the amount of this item was \$5800; for 1850, \$20,200.

The commerce of San Salvador is chiefly carried on through the means of fairs established by the government in the districts best suited for the exhibition of

the products of the state. The principal fairs are held at Chalatenango, San Vicente, and San Miguel. The two former take place on the 1st of November of each year; the latter, called "Fair of La Paz," on the 21st of the same month. It lasts about two weeks, and is far the most important of any held in the country. It attracts buyers and sellers, not only from all parts of Central America, but from nearly every part of the Pacific coast, as well as from England, Germany, France, and the United States. England sends calicoes, shirtings, drills, linens, hosiery, cutlery, iron, and steel; France, silks, cambrics, wine, and spirits; the United States, coarse cottons, sperm, and hardware; Spain, paper, wine, oil, and spirits; Germany, glass, hardware, and toys; Italy, oil, preserves, and liquors; Chili and Peru, hats, hammocks, *pellons*, etc.* About the only product given in exchange for them is the staple of the state, indigo. A second fair, called that of "Ceniza," takes place in San Miguel about the beginning of February. To both of these fairs large numbers of cattle are brought from Honduras and Nicaragua. In 1857 the number amounted to 17,854, averaging in value from \$5 to \$8 each. The imports and exports of the state for the years 1855 and 1857 are given in the accompanying table:

* The importers, before the day of the fair, send their goods to the city in bullock-carts. The *Plaza* is divided by the municipal authorities into lots, on which the non-resident merchants—many of them from great distances—construct huts with branches and hides. They then open shop and sell at retail. Formerly some of them sold between \$8000 and \$10,000 daily; but now, owing to competition and other causes, \$1000 is the average. As to wholesale operations, the resident merchants, and others from the interior and elsewhere, make arrangements with the inferior class of merchants, generally for produce of the country, on credit more or less extensive, according to the standing of the buyer, ranging from three months to two years. Excepting by retail, scarcely any cash business is done.

Imports and Exports of San Salvador for the Years 1855 and 1857.

IMPORTS.				EXPORTS.				
Packages.		Value in Dollars.		Articles.	Quantity.		Value in Dollars.	
1855.	1857.	1855.	1857.		1855.	1857.	1855.	1857.
23,877	33,010	698,219	860,104	Indigo, bales..	4,718	7,450	660,520	1,107,610
				Tobacco, do...	2,129	1,813	25,478	18,815
				Balsam of Pe- ru, lbs.	22,804	7,890	19,827	6,904
				Hides, No.	24,255	27,824	27,347	61,186
				Silver, ounces	8,416	3,112	8,416	3,118
				Do. Ore, bags	26	.....	2,240	.....
				Cedar Pl'k, ft.	25,515	.....	1,148	.....
				Sugar, lbs. ....	.....	865,651	.....	52,100
				Sundries.....	.....	.....	20,348	54,371
							765,324	1,304,102

The amount and value of the commerce of the state for the past four years are as follows:

	Packages.	Value.	
		Imports.	Exports.
1854	37,427	\$1,015,925	\$ 786,711
1855	23,877	698,219	765,324
1856	34,442	1,046,720	1,285,485
1857	32,257	860,104	1,304,102
	128,003	\$3,620,968	\$4,141,622

It will thus be seen that the aggregate of exports over imports for four years has been \$520,654. The value of exports depends mainly upon the indigo crop, and is consequently subject to great variations. The quantity of indigo exported was,

In 1853 . . . 7747 seroons.	In 1855 . . . 4718 seroons.
In 1854 . . . 4885 "	In 1857 . . . 7450 "

The great falling off in the indigo product of the years 1854-55 resulted from the devastations of the *chapulin*, or grasshopper, which swarmed over all Central America, cutting short all the crops, and generally deranging agriculture. Preparations were made for a large crop in the season of 1857-8, but these were interrupted by the appearance of the cholera at the season of gathering the *jiquilite*, or plant; so that, instead of the anticipated yield of 15,000 seroons, it seems

probable the number will fall short of 1846-7.* With the settlement of California a demand has sprung up for sugar, which is being rapidly supplied from San Salvador; not less than 865,000 pounds having been exported in 1857, against none in 1855.

The political organization of San Salvador corresponds generally with that of Honduras, with which it has always closely sympathized. In 1853, under the temporary ascendancy of a reactionary government, it withdrew its delegates from the Constituent Assembly, then in session in the city of Tegucigalpa, for the purpose of framing a Constitution for the organization of a Federal Republic, which should comprehend the three states of San Salvador, Honduras, and Nicaragua. At the same time, it declared itself a distinct and sovereign state, under the title of the "Republic of San Salvador."

The Constitution of the state confers the right of voting on all males over twenty-one years of age; but this right is forfeited by all those who are without a legal occupation, who become domestic servants, in the employment of a foreign power, of notoriously bad character, who contract debts fraudulently, *or who owe money to the state!* Foreigners can become naturalized after a five years' residence, or at the end of three years, in case of contracting marriage with a native of the state. No ecclesiastic can serve as president, senator, or deputy, nor can he hold any government office whatever. Military men, in active service, are equally excluded. The President must be not less than thirty-two

* There is a duty on the exportation of indigo of \$1 cash, and \$3 in *bonos*, per seroon; also 1 rial for a permit—amounting in all to \$4 12½ per seroon.

Export duty on silver 3 per cent.

Export duty on gold 1 per cent.

The import duty on foreign goods is 20 per cent. *ad valorem*; payable 8 per cent. in cash, and 12 per cent. in government drafts and *bonos*.

years of age, nor over sixty; must have resided in the state for the five years preceding his election, and possess a property within the state of not less than \$8000. A senator must be thirty years of age, a resident of the state for the three years preceding his election, and have a property qualification of \$4000. A deputy must be twenty-three years old, a resident in the district he represents, and have property of the value of \$500. The Legislature consists of two chambers, a Senate and House of Representatives, which meet on the 1st of January of each year. Its sessions are limited to forty days. The House is elected annually, the Senate one half every second year. The President must have an absolute majority of the popular vote; if no candidate receives this, the Legislature elects between the two candidates having the highest number of votes. His term is for two years, and he can not be elected for consecutive terms. Each department has a governor, appointed by the President, whose term is for two years, and he can not hold office for two terms in succession. The standing army is 2000 men.

San Salvador possesses, beyond question, the most enlightened population and most liberal government of any of the Central American states. It has a larger revenue than Guatemala, which has more than double the population; and, although lying wholly on the Pacific, its exports exceed those of any of its neighbors. It is a country eminently adapted for agricultural pursuits. Possessing a temperate climate, rich and varied soil, magnificent plains watered by innumerable streams, and mountains of gradual declivity, covered to their summits with the most luxuriant vegetation, it presents a field for every description of cultivation. The low lands yield the products of tropical latitudes, and

the high lands the grains and fruits of northern climates. The indigo plant, wheat, peaches, etc., grow within less than four leagues of each other.

Then, again, the reservations of lands made by the Spaniards in favor of the Indians have been the means of establishing an industrious rural population. By this means, roads have been opened leading to the most remote districts. Wherever these reservations were located, the Indians built their ranchos, and for leagues around lands were cultivated, even to the tops of the mountains. In course of time, these ranchos, which were huddled together in some retired valley, sprung into cities and towns. This has been the case in many instances, but in others they retain the peculiarity of construction, and the Indians their manners and customs, such as they must have been ages before.

In 1850 I had the honor, on behalf of the United States, of negotiating a treaty with Don Agustin Morales, plenipotentiary of San Salvador, which subsequently received the requisite ratifications upon both sides, and is now in full force and effect. It secures to the citizens of the United States all the rights, privileges, and immunities of citizens of San Salvador in commerce, navigation, mining, and in respect of holding and transferring property in that state. It guarantees to American citizens resident in the country the fullest protection in the enjoyment of religious and civil freedom, and, in short, every other right and privilege which has been conceded in any treaty negotiated between the United States and any other nation on the globe. And here it may be mentioned, as an illustration of the sympathy and good feeling which has always existed among the people of San Salvador in respect to this country, that in 1823, when doubts ex-

isted as to the possible organization of the Federal Republic of Central America, the State of San Salvador formally and solemnly decreed its aggregation to the United States.

San Salvador, as I have said, is relatively the most populous of the Central American states. It has, indeed, a relatively larger population than most of the states of the United States—nearly four times as many to the square mile as Maine, and more than Vermont or New Hampshire. Considering that it has no large capitals, like Mexico or Lima, within its borders, it is unquestionably more populous than any other equal portion of Spanish America. The traveler, however, would not be apt to receive this impression in traveling through the country, since comparatively few of the people live outside of the numerous villages which dot over the state in every direction. The inhabitants of these towns have their little patches of ground at distances varying from one to five miles from their residences, and think little of traveling that distance in the morning to work them, returning at night. It is this circumstance which lends much of picturesqueness and life to the journeys of the traveler, who, as he approaches the villages in the evening, or departs from them in the early morning, finds the paths thronged with people bearing their implements of cultivation, or loaded with the produce of their little *huertas* or *chacras*.

There is little public or unclaimed land in the state, and few large tracts held by single individuals. This is a circumstance favorable to the general industry, which contrasts creditably with that of the other states; and, upon a second and more extended acquaintance with the state and its people, I can only repeat

what I have before had occasion to say of San Salvador, that in respect of industry, general intelligence, and all the requisites of good order, its people are entitled to rank first in Central America. There is no part of Spanish America where individual rights are better respected, or the duties of republicanism better understood; and, whatever may be the future history of Central America, its most important part, in all that requires intelligence, activity, concentration, and force, will be performed by San Salvador.

CHAPTER XVI.

ABORIGINAL POPULATION OF SAN SALVADOR.

THE inquirer into the history and relations of the aborigines of America is often surprised to find enigmatical fragments of the great primitive families of the continent widely separated from their parent stocks, and intruded among nations differing from them in manners, language, government, and religion. These *erratic* fragments—to adopt a geological term—in some instances present the clearest and most indubitable evidences of their origin and relationship, in an almost unchanged language, and in a civil and social organization, manners, and customs, little, if at all, modified from those of their distant progenitors. The inference from this would naturally be that their separation had been comparatively recent; yet these identities have been found to exist in cases where tradition fails to assign a cause or period for the disruption, or even to indicate the manner in which it took place.

At the period of the discovery of America, a colony or fragment of that primitive stock, which, under the name of Quichés, Kachiquels, Tzendales, Mayas, etc., occupied nearly the whole of what is now Guatemala, Chiapa, and Yucatan, was found established on the River Panuco. They bore the name of Huastecas, and from them had proceeded those beneficent men who carried the arts of civilization and the elements of a mild religion into those regions, where the Acolhuas and Aztecas, or Nahuatls, afterward built up the so-

called Mexican empire. It was one of their leaders, bearing the hereditary name Quetzalcoatl in the Nahuatl dialect, and Cuculcan in the Tzendal, who taught the higher arts to the inhabitants of Cholula, and who afterward returned to the primitive seats of his fathers in the valley of the Usumasinta by way of the isthmus of Coatzacoalcas. The period of this migration to the Panuco dates back beyond the foundation of the principalities of Anahuac, and is anterior to the Tezcucan and Aztec dynasties.

In Central America, on the other hand, two considerable fragments of the true Nahuatl or Aztec stock were found intruded among the native or original families of that portion of the continent. One of these, as I have shown in my work on Nicaragua, occupied the principal islands in the Lake of Nicaragua, the narrow isthmus which intervenes between that lake and the Pacific, and probably a portion of the country to the southward as far as the Gulf of Nicoya. Their country was less than a hundred miles long by scarcely twenty-five broad; yet here they preserved the same language and institutions, and practiced the same religious rites with the people of the same stock who dwelt more than two thousand miles distant, on the plateaus of Anahuac, from whom they were separated by numerous powerful nations, speaking a different language, and having a distinct organization.

I have elsewhere indicated the character, habits, and religion of the Nahuatls of Nicaragua, and shown in what respect their language was modified, or differed from that spoken by the Nahuatls of Mexico.* I do not propose to go over that ground again, but to con-

* See article on the "Archæology and Ethnology of Nicaragua," part i., vol. iii. of Transactions of the American Ethnological Society

fine myself to some account of another and larger colony or fragment of the Nahuatl stock, which was situated between Nicaragua and Guatemala, principally in what is now the State of San Salvador, where their descendants still remain, retaining to this day their original language, and many of their primitive manners and customs.

Their existence here was affirmed by the earliest chronicles, but, as I have had occasion to say in treating of the Nahuatls of Nicaragua, the fact does not seem to have been generally accepted by modern ethnographers. In the absence of direct proofs, such as might be derived from a comparison of their language with that of the Nahuatls of Mexico, this is not surprising. The science of ethnology is now happily so far advanced as to require a closer authentication of the facts upon which it proceeds than can always be derived from the vague and frequently obscure allusions and statements of the ancient chroniclers.

The data necessary to establish the statements of the conquerors in the respect above indicated I was fortunate enough to obtain in my recent visit to Central America in the year 1853. During that visit I not only traveled extensively through Nicaragua and Honduras, which bound San Salvador on the south and north, but also traversed that state throughout its entire length and breadth, visiting in succession each of its departments.

As a general rule, the aboriginal population has been much modified by three centuries of contact with the whites, and an equally long subjugation to the Spanish rule; yet there are towns, even in the immediate vicinity of the capital, which have retained to a surprising degree their primitive customs, and in which

the aboriginal blood has suffered scarcely any, if indeed the slightest intermixture. In most places, however, the native language has fallen into disuse, or only a few words, which have also been accepted by the whites, are retained. The original names of places, however, have been preserved here with the greatest tenacity, and afford a very sure guide in defining the extent of territory over which the various aboriginal nations were spread.

In the neighborhood of Sonsonate there are several large towns, inhabited almost exclusively by Indians, who also use the national language in ordinary intercourse among themselves. The same is true of some of the towns on the southern flank of the volcano of San Vicente, whose inhabitants, no later than 1832, attempted to reassert their ancient dominion, and exterminate not only the whites, but all who had a trace of European blood in their veins.

There is, nevertheless, one portion of the State of San Salvador where the aborigines have always maintained an almost complete isolation, and where they still retain their original language, and, to a great extent, their ancient rites and customs. This district is known as the "*Costa del Balsimo*," or Balsam Coast. It is about fifty miles in length by twenty to twenty-five in breadth, lying between La Libertad, the port of the city of San Salvador, and the roadstead of Acajutla, near Sonsonate. This district is entirely occupied by Indians, retaining habits but little changed from what they were at the period of the conquest. It is only traversed by foot-paths so intricate and difficult as to baffle the efforts of the stranger to penetrate its recesses. The difficulty of intercourse is enhanced, if not by the absolute hostility of the Indians themselves, from their

dislike to any intrusion on the part of the whites, be they Spaniards or foreigners. I was, however, fortunate in numbering among my warmest friends in Central America two gentlemen, who are the principal purchasers of the celebrated "Balsam of Peru," which is obtained exclusively by these Indians, and constitutes their only article of sale and sole source of wealth. They not only have an extensive acquaintance with the Indians, but also great influence over them, which was exercised in putting me in relation with some of the more intelligent ones in their visits to the city of San Salvador. I was thus enabled to obtain a vocabulary of their language, which is nearly identical with the ancient Nahuatl or Mexican. The differences which exist are indicated in the comparison which is elsewhere made.

The towns of the Indians of the Balsam Coast occupy generally the level summits of the low range of mountains which extend parallel to the coast at the distance of about three leagues inland. Their houses are all thatched with grass or palm leaves, the churches only being covered with tiles. The largest town has no more than two thousand inhabitants. Very few among these Indians know how to read or write, but in this respect considerable advance has been made since the independence.

The mechanical arts are little understood, and, of course, the fine arts still less practiced. Music is cultivated to some extent, but only as an accessory to public worship. They profess the Catholic religion, but with no very clear idea of its more exalted tenets; and its ceremonies are interpolated with many peculiar aboriginal rites.

Their necessities are very limited. The women dress

in a blue skirt of cotton cloth woven in San Salvador, but go naked above the waist. They make two braids of their hair, trimming it with pearl-colored ribbon, and when they go out, cover their heads with a *tiara* of *mappoyan*. The men dress in a trowsers of cloth, made of the native cotton, woven by themselves in a kind of hand-loom. This, with a palm-leaf hat, such as are manufactured for sale in other parts of the state, completes their dress.

Matrimony is celebrated both as a civil rite and religious sacrament, as in other parts of the state; but the ceremonies which precede it are different and peculiar. As soon as the boy attains the age of fourteen years, and the girl twelve, the parents agree upon the match, perhaps without consulting the inclinations of the principals, and sometimes in contravention of them. When the betrothal is effected, the father of the son takes the girl to his house, and is obliged to educate and maintain her as if she were his own child. The labor of both boy and girl is at his service, but when it is supposed the new couple are able to sustain themselves, the parents jointly build a house, and give them means to start in life.

It is, nevertheless, not uncommon to see among these Indians a family of three generations, all married, living in the same house, and dependent upon the oldest pair.

These Indians respect not only the parental and public authority, but also the authority of age, in their public and especially in their private gatherings. They style the old persons "*Ahuales*." This title and authority is only conceded to persons over forty years of age, who have had charge of the treasure-boxes of their various saints, or who have served in some public ca-

capacity. But among these "officers" there is a rigorous scale of rank.

Their laws are ostensibly those of the state, but, in point of fact, these are not consulted in their civil and criminal decisions. Custom and common sense constitute their code of procedure. The meetings of their *cabildos*, or municipal courts, are always held at night, commencing at seven in the evening, and lasting until ten, or even later, if the matter in hand require it. The *cabildo* is lighted by a fire of dry wood, built in one of its angles. Here the people assemble, with their hats in their hands, exhibiting the greatest submission and deference to the authorities.

Their votes for president, deputies, etc., are always given in consonance with the indications which they receive from the seat of government, and which they regard in the light of orders.

Agriculture among them is carried on only to the extent of producing the maize requisite for the year, and nothing more. Their sole wealth consists of their balsam, calculated approximately to amount to twenty thousand pounds annually, and which they sell at four rials, or half a dollar the pound. This, it might be supposed, would gradually place in their hands some property, but it is quite spent in the festivals of the saints, which are rather eating and drinking bouts than sacred feasts.

Physically, these Indians have more angular and severer features than those of the other families of Guatemala and Nicaragua. They are not so symmetrical in form, and are darker in color, more taciturn, and apparently less intelligent. Their women are much smaller than those of the other Indian nations, are generally ugly, and, when old, little short of hideous. Through-

out the state they are industrious, and San Salvador, favored generally with a fertile and arable soil, is undoubtedly the best cultivated, as it is the best populated state of Central America.

Having thus indicated the present condition of the Nahuatls of San Salvador, and the district within which the ancient race has preserved its blood unmixed and its peculiarities almost unchanged, I now propose to define the extent of its occupation of the country at the period of the conquest. Upon this point the testimony of the early chroniclers is unusually direct, and, even if it were less so, the easily recognizable peculiarities of the Nahuatl names of places, of rivers, and other natural objects, would afford us a very sure guide in our researches.

When, in 1524, Pedro de Alvarado had subdued the kingdom of the Quichés, and received the submission of the Kachiquels, another powerful nation of the same stock, whose capital was not far from where the old city of Guatemala now stands, he obtained information of a great people situated farther to the southwest, on the coast of the South Sea, who were called *Pipiles*, and with whom the Kachiquels had little or no intercourse, and were in a state of almost constant warfare. Incited by his Kachiquel allies, and still more by his own ambition, he determined to undertake their reduction, and for that purpose set out from the Kachiquel capital with a large force of Spaniards and Indian auxiliaries.

Of this expedition Alvarado has himself given us a summary in his second letter to Cortez, and it is still easy to trace the route of his army, from the names of the places which successively fell under his arms, and which, with scarcely an exception, are still retained.

Between the territories of tribes or nations in a state of constant hostility or warfare against each other, there must necessarily be a "disputed ground," depopulated and desolate. Such a belt of country was traversed by Alvarado after leaving the Kachiquel capital which it took him three days to pass. "His advance," says Juarros, "was slow, for the reason that there was no intercourse between the people of Guatemala and the *Pipiles*, and roads were unknown."

On the third night, however, which was dark and rainy, he reached the town of Escuintepeque, and, although most of the inhabitants, seized with terror, fled without striking a blow, yet those who remained opposed an obstinate resistance. After five hours' hard fighting, he was obliged to fire the town, which was done at several points. But even these desperate measures failed, and it was not until he found means to threaten the principal cazique with the destruction of the neighboring plantations of cacao and maize that he was induced to surrender. Alvarado spent eight days here in reducing the neighboring towns and collecting the inhabitants from the forests, where they had fled in their alarm. He then advanced with his force, which now numbered three hundred Spanish infantry, one hundred horse, and six thousand Guatemalan and Tlascalcan auxiliaries, the latter being a portion of those who had accompanied him from Mexico.

The next obstacle which opposed his course was the River *Michatoyat*, which reaches the sea at the roadstead of Istapan, where Alvarado afterward built the vessels used in his expedition to Peru, and which is now the Pacific port of Guatemala. He crossed this river with difficulty, and, after much hard fighting, reduced the towns of Atiquipaque (called Atipar by Al-

varado), Taxisco (Tassisco), and finally reached Guazacapan, which, supported by Nextiquipaque, Chiquimulla, Guaimaiga, and Guanagazapan, made a vigorous resistance. The Spaniards finally carried the place, but only to find it deserted by its inhabitants. Alvarado, after spending several days in vain attempts to induce them to return to their homes and submit to the Spanish authority, was obliged to leave them unsubdued. They, however, ultimately submitted, of their own accord, to the authorities of Guatemala. Juarros mentions, as a singular circumstance, that the Indians of Guazacapan fought with little bells fastened to their wrists.

Proceeding onward beyond the Rio de los Esclavos, Alvarado encountered the strong town of Pazaca, supported by the neighboring towns of Sinacantan, Nau-cinta, Tecuaco, and others more distant. The Indians here strewed the ground with poisoned prickles, which wounded many of the horses and men, and caused them to die, in the course of two or three days, in great agony. The battle before Pazaca was long and bloody, and finally resulted in favor of the Spaniards; "but the victory," says Juarros, "did not entirely decide the conquest of the district; for, although some of the towns (among them Texutla) submitted, others, in strong force, still retained their liberty and native governments."

Alvarado continued his advance past the Rio Paza (or Pazaca) into the district of Izalco, which then, as now, was densely populated. Here he encountered a stout resistance, and was himself severely wounded. He nevertheless captured Moquisalco (the present Mo-huisalco), Acatepeque, Acasual (Caxocal), Tlacusqualco, and other towns, and finally reached the principal

or capital town of the Nahuatls, called Cuscatlan, a name which was also applied by them to their country at large.

After remaining here seventeen days, the rainy season coming on, Alvarado returned to the capital of the Kachiquels, near which he founded the ancient city of Guatemala. The details of the subsequent gradual reduction of Cuscatlan to the Spanish authority have not reached us in a connected form. We only know that the people resisted the Spaniards with great intrepidity, and that the latter only succeeded here, as elsewhere, through the agency of their horses and fire-arms. Without these the conquest of America could never have been effected.

The name of the first town reduced by Alvarado in this expedition, namely, Escuintepeque, written also Iscuintepēc, is undoubtedly Nahuatl, and probably derived from *itzcuintli*, the name of a species of indigenous dog, and *tepec*, mountain, or *altepetl*, place, *i. e.*, Place or Mountain of the Dog. This town, which still exists, gave its name to the district which lies to the westward of the Rio Michatoyat, and within which, according to Juarros, the Sinca dialect was generally spoken. This may have been true, for the Nahuatls often translated into their own language the names given to places in the territories of their neighbors, or, from inability to pronounce them, gave them names of their own. Thus Atziquinixai (the Home of the Eagle), which was the name of the capital of the Zutugil kingdom, was called *Atitlan* by the Pipiles or Nahuatls, which means, literally, place by the water, it being situated on the banks of a lake. *Quesaltenango* was thus substituted for the Quiché Xelahun, *Zapohitlan* for Xetuhul; and in Nicaragua, *Xolotlan* for Nagrando.

It is not improbable, therefore, that Escuintepeque was a name given by the Nahuatls to a town of the Sincas, and preserved by the Spaniards in consequence of their previous greater familiarity with the Mexican language.

Nor is it impossible, on the other hand, that the Nahuatls were spread along the coast, not only as far as Escuintepeque, but even to the River Nagualate.* Be this as it may, Alvarado expressly informs us that, after crossing the River Michatoyat, he came to Atiepas (Atiquipaque), *where the people spoke a different language from those of Escuintepeque.*† If the people of the latter town spoke the Nahuatl or Mexican, then it follows that the inhabitants of the district or province of Guazacapan, which extended from the Rio Michatoyat to the Rio Paza (or Aguachapa), had a different language. This conclusion would derive some support from the apparent total absence of Nahuatl names in that district. Herrera, however, gives us the probable key to the entire difficulty. He says, "*The natives of this province are humble, and speak the Mexican tongue, although they have another peculiar to themselves. When heathens, they observed the rites of the Chontals of Honduras.*" We may fairly infer from this testimony that the district of Guazacapan was occupied by a people probably of the same family with the Chontals of Honduras, who had either been subjected by their Nahuatl neighbors and compelled to adopt their language, or who had gradually gained a

* The name of this river seems to be compounded of *Nahuatl*, or, as it was universally written by the old chroniclers, *Nagual*, and *atl*, contracted into *at*, water, i. e., River of the Nahuatls.

† Fuentes states that the Nahuatl language was confined to "certain parts on the sea-coast, commencing at the town of Escuintepeque." Elsewhere, referring to the march of Alvarado, he says he advanced on Escuintepeque, "*que es la tierra de los Pipiles.*"

knowledge of it, and assimilated in other respects with them from long contact and association. Their assimilation probably had become sufficiently complete to justify us in classing them under the same general designation.

After passing the Rio Paza (Pazaca, or Aguachapa) into the district of Izalco, all doubts as to the relationship of the inhabitants disappear. They were, at the period of the conquest, as they now are, undoubted Nahuals; and from that river to the banks of the River Lempa, the people were entirely homogeneous. That the Lempa constituted their boundary on the southwest appears not only from the total absence of Nahuatl or Mexican names to the eastward of that river, in the ancient province of *Chaparristique*, now San Miguel, but also from the direct testimony of Herrera, who informs us that the town of Iztepeque, situated at the foot of the volcano of San Vicente, in the immediate vicinity of the city of the same name, was the last town of the Nahuatls in that direction. I quote his own language: "At this town of Iztepeque begins the country of the Chontals, speaking another language, and a brutish people."^{*}

The Lempa seems also to have bounded the territory of the Nahuatls upon the north; at any rate, there are but one or two towns bearing names in their dialect on the left bank of that river; and even if they did pass it at any point, their farther spread in that direction must have been speedily arrested by the high, desert ranges of the Cordilleras, which lie parallel to the valley of the Lempa in that direction, and which constituted the southern limits of the district of Corquin, whose inhabitants were allied politically, if not by

* Herrera, vol. iv., p. 154.

blood, to the people of Copan, who were themselves of the Kachiquel family. Lempira, the last of the chiefs of Corquin, made his final stand against the Spaniards on the mountain of Piriera, which overlooks the valley of the River Lempa, in the name of which beautiful stream his own is commemorated.

It follows, then, that the Nahuatls of San Salvador, at the period of the conquest, were spread over the entire country embraced between the River Michatoyat (possibly the River Nagualate) on the northwest, the River Lempa on the southeast, and between the Pacific Ocean on one side, and the abrupt ranges of the Cordilleras, overlooking the valley of the Lempa, on the other; that is to say, over a territory from one hundred and eighty to two hundred miles in length, by an average of sixty miles in width, and embracing an area of not far from eleven thousand square miles.

The chroniclers are unanimous in representing this district of country as "one of the best peopled in all America." It had many large towns, well built, and in all respects equal to those of Mexico. In his letter to Cortez, Alvarado tells us that, beyond the city of Cuscatlan, the farthest point which he reached in his first expedition, "there were great cities and villages, built of lime and stone." He adds also, by way of apology for not continuing his enterprise, that the country was too extensive and densely populated to admit of his subjugating it before the setting in of the rainy season.

The name given to the country of the Nahuatls of San Salvador was Cuscatlan, which, according to the chronicler Vasquez, signified "*tierra de prefeas ó fre-seas*," or, freely translated, "land of riches," a name which, considering the great beauty of the country, its

fertility of soil, and variety and luxuriance of vegetation, was equally appropriate and beautiful.* It was also called, according to the same authority, *Zalcoatitlan*.

According to Juarros, the name *Pipil* was given to the people of Cuscatlan from the circumstance that "they spoke a corrupt dialect of the Mexican language, with a childish pronunciation: the word *pipil* signifying children." This name is certainly no longer known, and it may be doubted if it was ever accepted or applied as a general designation. It may, indeed, have been used contemptuously by the Mexicans who accompanied Alvarado, and who, no doubt, affected a superiority over their kindred in Cuscatlan. *Pipil-pipil* is rendered by Molina, in his Dictionary, by the Spanish term *muchachuelos*, small boys; and *pipillotl* by *niñireca*, childishness. The translator of the "Codex Chimalpopoca," quoted by Bourbourg, renders *pipil-pipil* by *viejitos*, little old men.

The term *Nahuatl* or *Nagual*, and its ancient plural *Nanahuatl*, are the names under which all the tribes who spoke the Mexican idiom were known. It signified, in this application, an expert man, who spoke well his own language. In its primitive sense, the word *nahualli* meant secret, occult, mysterious, and in later periods came to designate a man versed in judicial astrology and the arts, a sorcerer or magician. The Spaniards gave the name of *nagualismo* to certain mysterious rites which are practiced to this day by the Indians, as also to their idolatrous practices generally. Nuñez de la Vega, in his "Constituciones Diocesanas," has given us an account of the *Nagualistas* of his day, at

* *Cuscatl*, in the Mexican language, signifies jewel or precious stone, and *lan* is a common terminal signifying place or locality.

which time the term *nagual* was used to express the idea of a demon or familiar spirit.

The form of government which existed in the ancient Cuscatlan seems not to have differed from that which prevailed among the people of the same stock in Mexico ; that is to say, there were a large number of petty chiefs, who exercised authority over single towns or districts and their immediate dependencies, but all, from their affinity in blood, language, and religion, more or less allied politically, and generally acting in concert. Such was the case in Mexico ; but the relationship was not so intimate as to prevent them from occasionally warring upon each other. A primitive state of society is inconsistent with extended dominion. Power, to be great, must be concentrated, and concentration without means of easy and rapid communication is impossible. The transmission and execution of orders, collection of men and supplies, and the movements of forces, all requisites to the establishment and support of an empire of any considerable extent, are impossible without the aids to be derived from navigation, the subordination of horses, or other beasts of burden, and the opening of roads ; without these, conquests can not be retained, nor local ambitions or discontents held in check. The empire of the Incas, the only one worthy of the name which was established by the aborigines in America, owed its existence, in a great degree, to the naturally easy means of communication between its various parts, improved by the construction of a vast system of roads and bridges, traversed regularly by a well-organized corps of messengers for the transmission of intelligence.

Juarros, quoting at second-hand from Fuentes, speaks of a monarchy as having been established over the Pi-

piles a short time previous to the conquest, but, for reasons elsewhere given, the whole account may be regarded as apocryphal. Neither Alvarado, nor any of the chroniclers, with this exception, refer to any higher authority in Cuscatlan than the local chieftains. Had there existed a king, or a chief having a general supremacy like that exercised by Montezuma in Mexico, the fact would not have escaped a special mention, for the vainglory of the *conquistadors* was more apt to lead them to exaggerate than undervalue the importance of the chiefs whom they subjugated. No doubt there were individual chiefs who possessed a power superior to the others, exercising a great influence over them, and perhaps arrogating a qualified authority; but, as I have said, this is a point upon which we have no precise information.

Upon the general subject of the religion and the manners and customs of the people, our information is also exceedingly scanty, and what we know is chiefly derived from the imperfect summary given by Herrera. We may, however, safely assume that, in these respects, they corresponded very closely with the affiliated nations of Mexico. It appears certain that they had an organized priesthood, and a class of persons corresponding to the keepers of the records of the valley of Anahuac. Their high-priest, says Herrera, wore a long blue dress, had a species of mitre on his head, from which depended bunches of feathers of various colors, and carried in his hand a species of staff or crosier. Next to him in rank was "a notable doctor in their books and sorceries, who explained their omens." Besides these there was a kind of ecclesiastical council, composed of four persons, who were consulted on all matters pertaining to the rites of religion. In case of

the death of the high-priest, a successor was selected from these four by the chief and council, by lot.

They paid adoration to the rising sun, and "had two idols, one in the shape of a man and the other of a woman," to whom they offered sacrifices. Their sacrifices were made at particular periods, which were fixed by their calendars. There were, however, two principal ones, viz., "at the beginning of winter and the commencement of summer," probably at the periods of the summer and winter solstices. On these occasions, according to Herrera, they sacrificed human beings, illegitimate children of their own nation, "from six to twelve years of age." The ceremony and accompanying rites were the same as those practiced in Mexico, and consisted in tearing out the heart of the victim, and scattering his blood to the four points of the compass. The priests were consulted on the subject of declaring war, and successful wars were celebrated by festivals, which lasted for fifteen days, each of which was distinguished by the sacrifice of a prisoner. If the sacrifices were made to the female divinity, the festival lasted for but five days.

Marriages seem to have been made under the direction of the chiefs, and consisted in first submitting the parties to lustrations, such as washing them in a river, and afterward tying them together in the bride's house, whither the relations brought presents to the new couple, the priest and cazique being present at the ceremonies. Children received their names from the priests, to whom presents were made on the occasion of naming the child. After childbirth the mother was obliged to submit to a lustration in a running stream, to the waters of which an offering of copal and cocoa was subsequently made, "that it might not hurt her."

Only the kindred lamented for the death of ordinary persons, but the death of a cazique or war-chief was signalized by a general mourning of four days, at the end of which time the priest announced that the soul of the deceased was with the gods. The son of the chief, or, in default of one, his nearest relative, succeeded to his authority. Rape was punished with death; adultery by making the offender the slave of the injured husband, "unless pardoned by the high-priest on account of past services in war." There were certain degrees of relationship, seven in number, within which it was unlawful to marry, and within which all sexual intercourse was punished with death. Upon matters of this kind there existed the greatest rigor; "for," says Herrera, "he who courted or made signs to a married woman was banished." Fornication was punished by whipping. Robbers, according to Juarros, were banished, and murderers put to death by being thrown from a high rock.

The assertion of Herrera as to the practice of human sacrifices is distinct and unqualified; but if we are to credit the Pipil MS. quoted by Fuentes, and after him by Juarros, these sacrifices were so repugnant to the people that the attempt of Cuauemichin to introduce them led to the general insurrection of the people, and his own deposition and death; but, as I have already had occasion to observe, I attach but little value to this authority, and have no doubt of the existence of human sacrifices, as affirmed by Herrera.

Juarros gives us an account of the origin of the Pipil Indians, which appears to have been chiefly drawn from Fuentes, who, in turn, seems to have relied mainly upon a certain MS. history of that people, written by one of the Pipil chiefs. It represents that Autzol

(Ahuitzol), the eighth king of Mexico (who reigned from 1486 to 1502), failing in his attempts to reduce the Tzendals, Quichés, Kachiquels, and their affiliated nations to his authority by force, sought to effect the same object by fraud. To this end he directed a great number of his Indian subjects to introduce themselves by degrees into the country, under the disguise of merchants, so as to be ready to co-operate with him when he should next undertake its subjugation. This plan was defeated by his own sudden death in 1502. The Indians, however, who had thus obtained a footing in the country, "multiplied immensely," and spread over the provinces of Sonsonate and San Salvador. Being of the lowest class of the population, and speaking a corrupt dialect of the Mexican language with a childish accent, they were called Pipils, "which signifies children."

Their rapid increase alarmed their Kachiquel and Quiché neighbors, who sought every opportunity to oppress them. They nevertheless made a firm resistance, and established a large army, under the direction of warlike chiefs, for their defense. These chiefs gradually came to exercise supreme authority over the people, and the principal cazique, named Cuauemichin, finally undertook to introduce human sacrifices. This attempt aroused the people, who killed him in their rage. They then elected a chief of mild character named Tutecotzimit as their head, and reduced all the other chiefs to the class of *alahuaes*, or heads of *calpuls*. Nevertheless, Tutecotzimit was not without ambition; and, desirous of perpetuating the sovereignty in his own family, he created a council of eight members, composed of his own relations and adherents, whom he constituted nobles. These officers were in-

vested with high authority, and distinguished from all others by long robes of particular colors, the use of which was interdicted to every other rank. While doing this for his own benefit, he ameliorated the condition of the people at large, and made himself so popular that the supreme power was vested in him and his family without opposition. The descent was fixed in the eldest son, provided, in the opinion of the council above alluded to, he was competent to the administration of affairs; if not, the second son was made king, or else the nearest relative of the deceased sovereign. Females were excluded from the succession, but this limitation did not prevent them from inheriting property. All high employments, civil and military, were the prerogatives of the nobles, "who could only reach that dignity through the gradations of inferior offices."

This traditionary account, so far as it professes to relate the origin of the so-called Pipil population, is simply puerile and absurd. Both Fuentes and Juarros must have forgotten that Ahuitzol ascended the throne of Mexico no earlier than 1486, only thirty-six years before Alvarado invaded Guatemala. The latter found the country, from the River Michitoyat to the Lempa, a distance of more than one hundred and sixty miles, entirely and densely populated by these Indians of the Nahuatl stock, who were regularly organized, and possessed large and well-built towns. On the hypothesis of this tradition, "the merchants" sent by the cunning Ahuitzol must not only have dislodged the original occupants of the country and built many large towns, but also increased their numbers to this incredible extent, all in the short space of thirty years, for the tradition distinctly says that the Mexican monarch

did not resort to this scheme until after his attempts to reduce the Guatemalan nations by force had failed.

The relations which existed between the Nahautls or Pipiles and their neighbors of Guatemala are represented by all the chroniclers as the reverse of cordial. "The people of Guatemala," says Fuentes, "held them in great contempt, and never mixed with them."

Without at present venturing into any speculations on the subject of the origin of the Nahuatls of Nicaragua and San Salvador, it may nevertheless be observed that the hypothesis of a migration from Nicaragua and Cuscatlan to Anahuac is altogether more consonant with probabilities and with tradition than that which derives the Mexicans from the north. And it is a significant fact, that in the map of their migrations presented by Gemelli, the place of the origin of the Aztecs is designated by the sign of water (*atl* standing for *Aztlan*), a pyramidal temple with grades, and near these a *palm-tree*. This circumstance did not escape the attention of the observant Humboldt, who says, "I am astonished at finding a palm near this teocalli. This tree certainly does not indicate a northern region." We must look for the primitive country of the Nahuatls to the south of Mexico. No history, chronicle, or known hieroglyphic of the Mexicans assigns a northern origin to the Nahuatl tribes, except the relation of Ixtlilxuchitl, who wrote at the expiration of a considerable period after the conquest, and who, in this, only followed Cortez and the Spanish authors who had preceded him. Even Montezuma, in his conversation with Cortez, affirmed that his ancestors came from a different direction; but the Spaniards, conceiving that they must have come from the north, pronounced the emperor in error, as if he were not better acquainted with the traditions of his own people than themselves!

Y

Upon the subject of the language of the Nahautls of Cuscatlan there is very little to be presented. As I have already said, I obtained a short vocabulary of the dialect now spoken on the Balsam Coast from one of the principal men of the village of Chiltiapam, which falls within that district. I also obtained a few words from an Indian of the large town of Izalco, near Sonsonate. In both cases I adopted the Spanish orthography, and have not only given the sounds of the words as closely as it was possible for me to convey them, but also without any attempt to harmonize them with the Mexican. From the subjoined comparative table it will be seen that the variations from the Mexican of the dictionaries is very slight—hardly greater than would be made by different investigators in writing down the same words as they might be sounded to them by the same person. The principal variation is precisely that which I have elsewhere had occasion to remark in the pronunciation of the Nahuatls of Nicaragua, viz., the general omission or contraction of the well-known Mexican terminal *tl* or *tli*. Some other peculiarities are indicated in a MS. note prefixed to a copy of Molina's Mexican Dictionary (1571), which I had the good fortune to obtain in the city of San Salvador, and which I have reason to believe belonged to the now extinct convent of the San Franciscan monks, who were the first to introduce Christianity in the ancient Cuscatlan. This note is partially obliterated, but the paragraphs which can be made out are as follows:

“In this province the *l* is not pronounced; thus, in *tlativez*, to throw, the *l* is omitted, and the word becomes *tativez*: nor do they * * * * * as, for example, *totox* becomes *toto*, or * * * . The *c* is confounded with the *q*, and thus for *cue* they say *que*.

* * * Nor do we find *tla* in these parts, nor *ta* ; thus, for *tlatemu*, to descend, they say simply *temu*."

English.	Nahuatl of Mexico.	Nahuatl of Balsam Coast.	Nahuatl of Izalco.
man,	tlacatl,	tacat.	
woman,	cihuatl,	ciguat.	
head,	tzontecon,	tzunteco.	
hair,	tzuntli,	tzunka.	
hand,	mail,	mapipi.	
heart,	yulotli,	yul.	
bread (wheat),	tlaxcalli,	tashkat.	
heaven,	ylhuicatl,	ilhuicac.	
sun,	tonatiuh,	tona,	tonal.
moon,	metztli,	mezti,	metzti.
star,	citlali,	citatl,	cital.
night,	tlalli,	tailua.	
wind,	ehecat,	ehecat.	
fire,	tletl,	titl,	tet.
water,	atl,	at,	at.
earth,	tlalli,	tal,	tal.
mountain,	tepetl,	tepetl.	
stone,	tetl,	tetl,	tet.
maize,	centli,	cinte,	cinte.
tree,	quauitl,	quahuit,	quahuit.
grass,	çacatl,	sacat.	
pine-tree,	oco-quauitl,	ocot.	
deer,	mazatl,	mazat.	
rabbit,	tochtli,	tutzti.	
snake,	coatl,	coatl,	cahuat.
bird,	tototl,	totot.	
fish,	michin,	mitzin.	
white,	yztac,	itztac.	
black,	tliltic,	tiltic.	
red,	chichiltic,	chiltic.	
great, big,	vey,	hue.	
many,	miec,	miak.	
church,	teupan,	teupan,	tupan.
house,	calli,	ka,	cal.

English.	Nahuatl of Mexico.	Nahuatl of Balsam Coast.	Nahuatl of Izalco.
1	ce	ce,	ce.
2	one,	ome,	home.
3	yey,	yac,	yey.
4	nauí,	nahue,	nahue.
5	maquilli,	naquil,	maquil.
6	chicace,	chisuasin.	
7	chicome,	chicome.	
8	chicuey,	chicuei.	
9	chicunauí,	chicunahue.	
10	matlactli,	mahtlati.	
11	matlactlionce,	mahtaticce.	
12	matlactliomome,	mahtatiome.	
20	cempoualli,	cempual.	

It should be observed here that the Indians of Izalco, as well as those of the Balsam Coast generally, affirm that their language is Nahuatl, or, according to their pronunciation, Nahual. Nevertheless, a late German traveler, who has published a brief vocabulary which he obtained in Izalco, denominates the same "Tlascalteca." Now the Tlascaltecas spoke the Nahuatl language, the same as the people of Jamaica speak English; but it would hardly be critical to affirm that the people of Australia speak the Jamaica language because they too speak English. There were Tlascalans in the army of Alvarado, and it is possible that some of them may have been established, as military colonists, in San Salvador, as we know they were in Guatemala. But they neither introduced a language, nor gave a name to any which existed there. The designation "Tlascalteca" is therefore uncritical and incorrect, and likely to lead to false inferences.

Although, as affirmed by Alvarado, the country of Cuscatlan abounded "in great cities built of lime and stone," yet there remain at this day very few evidences

of their existence. I found various mounds, of considerable size and regular outlines, near Sonsonate, and on the plain of Jiboa, near San Vicente; but the only remains of an imposing character of which I could ascertain the existence in the state were those of Opico, near San Vicente, at the foot of the volcano of the same name. These cover nearly two square miles, and consist of vast terraces, ruins of edifices, and circular and square towers, and subterranean galleries, all built of cut stones. A single carving has been found here, on a block of stone eight feet long by four broad. It is in the true Mexican style, representing probably a prince or great warrior. Various aboriginal monuments are affirmed to exist on certain islands in Lake Guija, in which the River Lempa takes its rise, but nothing positive is known concerning them.

In the Department of Jutiapa, however, which, while it falls within Guatemala, adjoins on San Salvador, with which its ancient relations were chiefly held, some extensive and interesting ruins have lately been discovered, of which Señor Don José Antonio Urritia, cura of Jutiapa, has communicated the subjoined account. It should be observed that the district within which these ruins are found fell within the ancient *Guazacapan*; and it is not impossible that *Cinaca-Mecallo* was one of the fortified towns reduced by Alvarado.

“Sharing in those archæological tastes which fortunately are spreading in this country, so rich in monuments of an ancient civilization, I have lately devoted some time in the study of the antiquities falling within the extensive parish under my charge, and of which I propose to give you some brief notices; first, in reference to the fine ruins, hitherto unknown, of the very ancient city called *Cinaca-Mecallo*.

“To the southward, and not far from the town of Comapa, are some steep mountains, the bases of which are washed by the large river Paz or Paza, which constitutes the boundary between Guatemala and San Salvador. Upon the highest of these mountains is an extensive plain, drained by a multitude of small streams, the waters of which, uniting in a common channel, are precipitated over a ledge of rocks fifteen yards in height, and mingle with those of the river, forming one of the most beautiful cataracts in this department. Upon the highest part of this plain are found the remains of an ancient city of the primitive inhabitants of America, which have successfully resisted the attacks of time, and the heavy walls of which seem ostentatiously to defy the operations of the elements. The lofty position of these ruins, from which may be traced the majestic course of the river, which flows at the base of the mountains, even to the sea, and from which the eye traverses the wide plains dotted with the villages of the neighboring state of San Salvador, taking in the volcanoes of Chingo and Izalco, the American Vesuvius, with its plume of smoke rising to mid-heaven, and including the Lakes of Guija and Atescatempa—this position lends additional interest to the ruins, since it indicates a high appreciation of the grand and beautiful on the part of the builders of the ancient city.

“The place where these ruins are found, as I have said, is known by the name of *Cinaca-Mecalco*, which, in the mixed idiom of Mam and Mexican now spoken by the people of this district, signifies *knotted rope* (*cordel anudado*), given, perhaps, by the primitive inhabitants in consequence of the many vines found in these mountains, and used in binding together the frames of the huts and houses of the people.

“The walls, or remains of the wall of the city, describe an oval figure, within which various roads or streets may be traced, various subterranean passages, and many ruined edifices. The materials of construction are principally thin stones, or a species of slate, united by a kind of cement, which in color or consistence resembles melted lead (*plomo derretido*). Among the monuments there are three which claim special notice. The first of these is a temple consecrated to the sun, chiefly excavated in

the solid rock, and having its door opening toward the east. On the archway of the entrance, which is formed of slabs united to each other, are found sculptured representations of the sun and moon, and in the interior are found some hieroglyphics. This monument is known among the Indians as *Tee-tunal*, 'stone of the Sun.' Besides the *bassi-relievi*, these stones bear hieroglyphics painted with a kind of red varnish, which, notwithstanding its long exposure to the weather, remains unimpaired. Many of the stones found in excavating, in all parts of these ruins, are painted with this varnish.

"Of the subterranean passages found among these ruins, there is one which has become celebrated, and is still the subject of many popular stories, as having been the retreat of a celebrated bandit named Partideño, who was finally captured here by the people of Comapa. Desiring to explore this passage, and in spite of the entreaties of the superstitious Indians not to venture in it, I provided myself with a hatchet and a torch of pine, and entered. After many difficulties, I succeeded in reaching a kind of saloon, where I found various blocks of stone carved with the arms of the ancient Indians, in all respects similar to others which I had previously found in other parts of the ruins, and sent to the President of Guatemala in 1853.

"The second notable object, and which is no less worthy of attention, is a great slab of stone, covered with inscriptions or hieroglyphics, which, from the little knowledge I have been able to obtain of their meaning, appear to me to convey only representations of the economy of human life (*la pintura de la economía de la vida humana*). The first is a tree, symbol of life; the last a skull, emblem of death.

"The third object is a wild animal resembling a tiger, sculptured in a stone or rock of great size, and which I conjecture was intended as a monument commemorative of some great victory. The reasons for this conjecture are these: In this town (Comapa), as in most of the Indian towns, the custom is still general of preserving a knowledge of great events in their history by means of representations called *bailes* (dances), which are, in fact, dances in the public squares on the days or evenings of great solemnities. It is most interesting, for one who

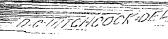
understands something of the language, to participate in these *bailes*, as he can thereby obtain some knowledge of the most remote traditions and events in the history of the Indians. In one of these *bailes*, which I have several times witnessed, is represented a great battle. The company, dressed in the skins, and wearing the heads of animals on their own, are divided into two sections, and arranged against each other. Before commencing the attack, one party makes propositions of peace to the other, which are rejected. The signal of battle is then given, accompanied with wild shouts. After a long contest, victory declares in favor of the party which bears the head of a deer. At the end of the representation the vanquished party leaves the ground, and the other, with a pole, traces in the sand the figure of some animal. The carved representation of an animal to which I have referred, and the distance from the ruined city where it is found, lead me to believe that this monument refers to the same event with the *baile* which I have described.

“These are among the most remarkable objects found in this ancient and ruined city. Outside of the walls, and in a little plain not far distant, are a number of mounds, which doubtless are the burial-places of the dead. The proportions of these rude sepulchres, unshaded by cypresses and unmarked by chiseled stones, nevertheless convey to us the probable position and influence of the dead whom they cover. It is a custom, still preserved among the Indians, to throw a handful of earth or a stone upon the grave of the distinguished dead, as a tribute to their memory. The more numerous these contributions, the higher the tumulus which is thus gradually accumulated.”

All the ancient chroniclers affirm that two languages were spoken in this district; one the Pipil, or Nahuatl, and the other “the peculiar language of the people,” called Popoluca. Now the word *Popoluca* signifies, in the Mexican language, “stranger, foreigner, barbarian,” and is nearly synonymous with *Chontal* or *Chontalli*; and as that term was applied by the Mexicans, precisely as we apply the term barbarian, to the ruder peo-

ple by whom they were surrounded, we may infer that it was used synonymously with Popoluca, particularly as, in this instance, the people of Guazacapan are affirmed to have had the religious rites and general habits of the Chontals, or "barbarians" of Honduras, their neighbors. The *Mam*, or *Mame*, however, is simply a dialect of the Tzendal (in common with the Kachiquel, Zutugil, Quiché, and Maya), and the people who spoke it had their capital at Gueguetenango, to the northeast of the present city of Guatemala.

It is not probable that the "rude and brutish Chontals" ever built monuments, sculptured and painted with hieroglyphics, like these described by Señor Urrutia. These support the inference that the Kachiquels, or some of their affiliated nations, once occupied the district of Guazacapan, whence they were displaced by aggressive neighbors. Facts go far to show that the Nahuatl were an aggressive people, advancing northward; that they had encroached upon the territories of their neighbors in that direction, and had imposed their own language, to some extent, upon the overawed or conquered inhabitants. Accepting this hypothesis, it is easy to conceive of a frontier town, like that of *Cinaca-Mecallos*, falling before the superior forces of its enemies, and becoming reduced to a heap of ruins. May not the scenic representation, or *baile*, which Señor Urrutia describes, refer to this very catastrophe? And may we not suppose that this contest was so widely spread as to include Copan within its destructive range? Certain it is that the latter was a ruin long before the arrival of the Spaniards; and we can hardly account for its abandonment and desolation, except as a consequence of devastating wars carried on by rival nations.



SAN JUAN—1849.



SAN JUAN—1853.



POINT ARENAS—1853.

N I C A R A G U A .

CHAPTER XVII.

NICARAGUA — EXTENT — GENERAL CHARACTER — PRODUCTIONS—VOLCANOES, ETC.

THE boundaries claimed by the Republic of Nicaragua are those which pertained to it as a province, viz., the Caribbean Sea on the east, from the lower or Colorado mouth of the San Juan River to Cape Gracias á Dios; and the Pacific Ocean on the west, from the mouth of the Rio Salto de Nicoya, or Alvarado, on the Bay of Nicoya, to the Bay of Fonseca. On the north, and separating it from Honduras, its boundary extends from the mouth of the Rio Negro, falling into the Bay of Fonseca, to the head-waters of the Rio Wanks, or Segovia, following down that river to the sea, at Cape Gracias. Its southern boundary, separating it from Costa Rica, is claimed to be a right line drawn from the Colorado mouth of the San Juan River to the mouth of the Rio Salto de Nicoya. Nicaragua is therefore embraced between $83^{\circ} 20'$ and $87^{\circ} 30'$ W. long., and $9^{\circ} 45'$ and 15° N. lat., and embraces an area of not far from 59,000 square miles.

A considerable part of this territory, however, embracing the entire Atlantic coast, with an undefined extent inland, from the River San Juan to Cape Gracias, has been claimed on behalf of the Mosquito Indians (*see Mosquito Shore*), but the claim has never been conceded by Nicaragua. The whole territory south of the River San Juan, and below the little river Flores,

flowing into the Pacific, embracing the ancient department of Guanacaste, has been claimed by Costa Rica, and is at present in the actual occupation of that state. Should these claims be ultimately admitted, they will reduce, by nearly one half, the territorial area of the republic.

Politically, Nicaragua is divided into five departments, exclusive of the disputed department of Guanacaste, each of which is subdivided into districts for municipal and other purposes. The departments are as follows :

Departments.	Capitals.	Population.
Meridional	Rivas	20,000
Oriental	Granada . .	95,000
Occidental	Leon	90,000
Septentrional of Matagalpa .	Matagalpa .	40,000
Septentrional of Segovia . .	Segovia . . .	12,000
	Total .	257,000

The population here given is the result of a census attempted in 1846. It was only partially successful, as the inhabitants supposed it preliminary to some military conscription or new tax. Making due allowance for the deficiencies of this census, we may estimate the actual population of Nicaragua at not less than 300,000. The civilized Indians of Nicaragua, and the Meztizos, or mixed Indians and Spaniards, constitute by far the largest proportion of the inhabitants. The whites are but a small part of the whole, and are nearly equaled in numbers by the negroes. The entire population may be divided as follows, with approximate exactness :

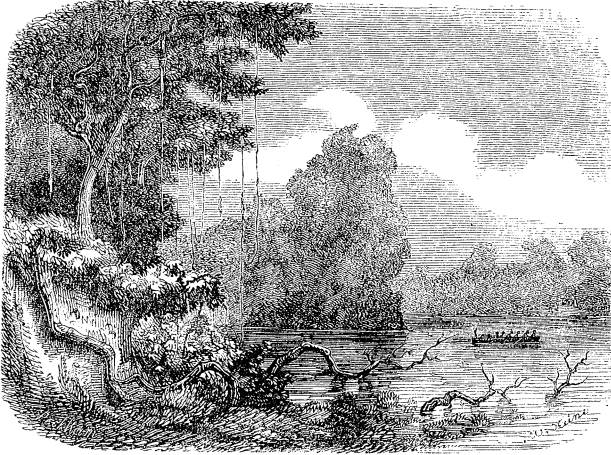
Whites	30,000
Negroes	18,000
Indians	96,000
Meztizos	156,000
Total	300,000

The geographical and topographical features of Nicaragua are not only remarkable, but interesting to the world at large, from the facilities which they are supposed to afford for opening a ship-canal between the Atlantic and Pacific Oceans. The northern part of the republic, embracing the whole of the district of Segovia and a portion of Chontales, borders on the high grounds, or plateau of Honduras, and partakes of its mountainous character. The valleys are narrow, and the numerous streams which flow through them rapid and turbulent. The hills are clothed with pines and oaks, and the aspect and climate of the region are those of the temperate zone. Here are found numerous rich mines of gold, silver, and copper; and many of the streams carry gold in their sands, whence it is washed, in considerable quantities, by the Indians. To the southward of this elevated district, and between it and the high mountain group, or centre of elevation in Costa Rica, is the broad basin of the Nicaragua lakes, lying transversely to the great range of the Cordilleras, and completely interrupting it. It is precisely this feature which has directed attention to Nicaragua as probably the best point where the oceans may be connected by a canal. This great basin or valley is not far from three hundred miles long by one hundred and fifty miles wide, and consists, in great part, of broad, beautiful, and fertile plains. In its centre are spread out the lakes of Nicaragua and Managua, which collect the waters flowing inward from every direction, and discharge them, through a single outlet, the Rio San Juan, into the Caribbean Sea. Some of the streams flowing into these lakes, especially from the north, are of considerable size, and furnish a supply of water which could not be sensibly affected by drains for artificial purposes. Lake

Managua is a beautiful sheet of water, not far from fifty miles long by twenty-five broad, and with an average depth of five fathoms. It approaches, at the nearest point, to within twenty miles of the Pacific Ocean, from which it is separated, on the south, by a range of low volcanic hills; but between its northern extremity and the sea there are only the magnificent plains of Leon and El Conejo, in the midst of which rise the regular cones of the volcanoes of El Viejo, Telica, and Axusco. The gigantic volcano of Momotombo stands out boldly into the lake, its bare and blackened summit, which no human foot has ever pressed, crowned with a light wreath of smoke, attesting the continued existence of those internal fires which have seamed its steep sides with burning floods, and which still send forth hot and sulphurous springs at its base. Upon the northern and eastern shores of the lake, lifting their blue, rugged peaks one above another, are the mountains of Matagalpa, gradually merging into those of Segovia, rich in metallic veins. Upon the south and west are fertile slopes and broad plains, covered with luxuriant verdure, and of almost unlimited productiveness; while in the lake itself stands the island of Momotombita, an almost perfect cone in outline, covered with a dense forest, in the deepest recesses of which are still found gigantic idols, the rude relics of aboriginal superstitions. The town of Leon was first built on the northwestern shore, at a place now called Moabita, which was subsequently abandoned for its present site, in the midst of the great plain of the Marabios. From this circumstance the lake is sometimes called Lake Leon. The great feature of Nicaragua, however, is the lake of the same name, the *Cocibolca* of the aborigines, which is, unquestionably, one of the finest bodies of water on the

American continent. It is upward of one hundred miles in greatest length by about forty in average width. Upon its southern shore, near the head of the lake, stood the ancient city of Granada, once the rival of Leon, and the most important commercial town in the republic. A few miles below Granada, and projecting boldly into the lake, is the extinct volcano of Mombacho, five thousand feet in height. Studding the lake at its base is a cluster of innumerable small islands, called *Los Corales*, of volcanic origin, rising in the form of cones to the height of from twenty to one hundred feet, and covered with verdure. Upon the same shore with Granada, but forty miles distant, is the equally ancient city of Rivas, or Nicaragua, the capital of a large, fertile, and comparatively well-cultivated district. Flowing into the lake at its extreme southern extremity, nearly at the same point where the Rio San Juan (the ancient *El Desaguadero*) commences its course, is the considerable Rio Frio, which has its origin at the base of the great volcano of Cartago and Terralbia, in Costa Rica. It flows through an unexplored region, inhabited by an unconquered and savage tribe of Indians, called Guatusos, of whose ferocity the most extraordinary stories are related. The northern shore of the lake, called Chontales, for the most part is undulating, abounding in broad savannas, well adapted for grazing, and supporting large herds of cattle. There are a number of considerable islands in the lake, the largest of which are El Zapatero, Solentenami, and Omotepec. The two former are deserted, but the latter has a considerable population of Indians, of the pure Mexican or Aztec stock. This island is distinguished by the two high conical mountains, or volcanic peaks, called respectively Omotepec and Madeira, which are

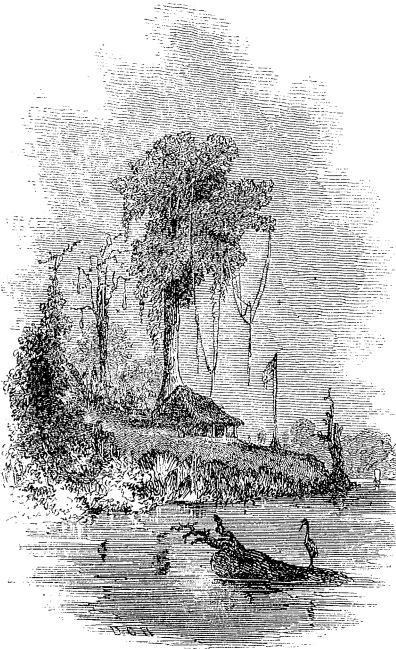
visible from every part of the lake, and from a distance of many leagues on the Pacific. The name of the island, in the Nahuatl or Mexican language, signifies two mountains, from *ome*, two, and *tepec*, mountain. The water of the lake in most places shoals very gradually, and it is only at a few points that vessels of considerable size may approach the shore. Still its general depth, for all purposes of navigation, is ample, except near its outlet, where for some miles it does not exceed from five to ten feet. There are points, however, where the depth of water is not less than forty fathoms. The prevailing winds on the lake, as, indeed, of the whole state, are from the northeast; they are the Atlantic trades, which here sweep entirely across the continent, and, encountering the conflicting currents of air on the Pacific, form those baffling, revolving winds, detested by navigators, under the name of *Papagayos*. When the winds are strong the waves of the lake become high, and roll in with all the majesty of the ocean. At such times the water of the lake is piled up, as it were, on its southern shore, occasionally producing overflows of the low grounds. As the trade-winds are intermittent, blowing freshly in the evening and subsiding toward morning, the waters of the lake seem to rise and fall accordingly; and this circumstance gave rise to the notion, entertained and promulgated by the ancient chroniclers, that the lake had a regular tide, like that of the sea. Some of them imagined, in consequence, that it communicated with the ocean by a subterranean channel. As already observed, the sole outlet of the great Nicaraguan basin, and of the lakes just described, is the River San Juan, debouching into the Caribbean Sea at the well-known port of the same name. This river is a magnificent stream, but its capacities have been



VIEW ON THE RIVER SAN JUAN.

much exaggerated, as will be seen in the paragraphs re-

ferring to the proposed ship-canal. It flows from the southeastern extremity of Lake Nicaragua, nearly due east, to the ocean. With its windings, it is 128 miles long. The body of water which passes through it varies much at different seasons of the year. Of course it is greatest during what is termed the "rainy season;" that is to say, from May to October. To this variation, in some degree, may be ascribed the wide dif-

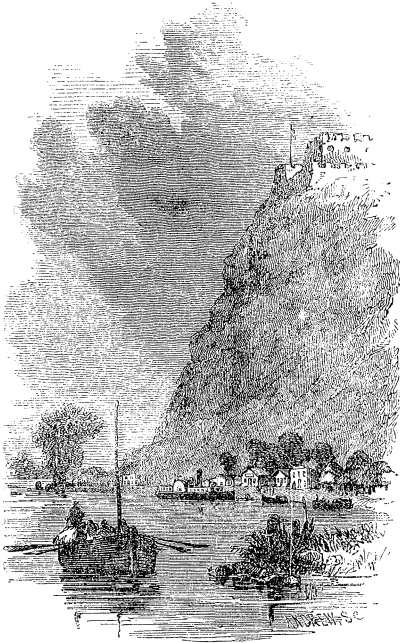


HIPPI'S POINT—MOUTH OF SERAPIQUI.

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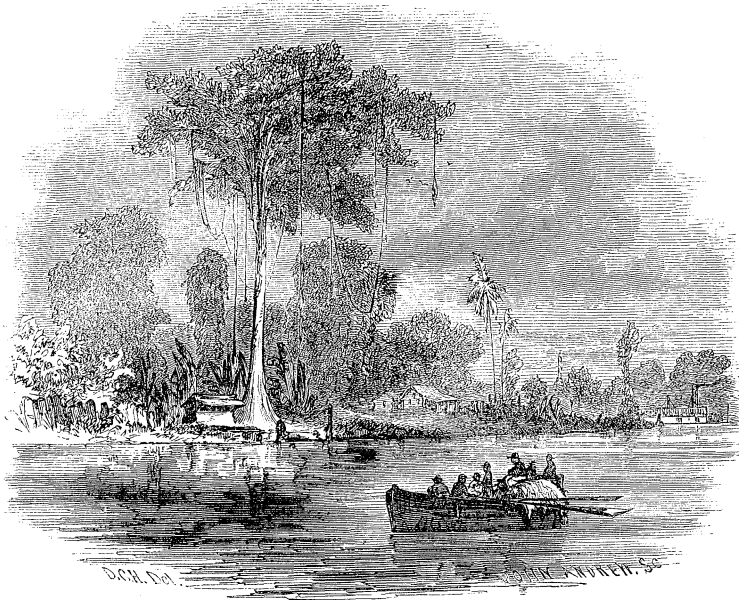
ference in the statements of the depth and capacity of the river made by different observers. Several considerable streams enter the San Juan, the largest of which are the San Carlos and Serapiqui, both rising in the highlands of Costa Rica. The streams flowing in from the north are comparatively small, indicating that the mountains are not far distant in that direction, and that upon that side the valley is narrow. The Serapiqui is ascended by canoes to a point called *El Meulle*, about twenty miles above its mouth, where commences the road, or rather mule-path to San José, the capital of Costa Rica. About midway between the lake and

the ocean, on the south bank of the river, are the ruins of the old fort or castle of San Juan, captured by the British in 1780. The expedition against it was commanded by Col. Polson, with Captain, afterward Lord Nelson, as second in command. Of 200 men under Nelson, taken from his vessel, the *Hinchinbrook*, but ten returned to the coast. At one time, besides this fort, one at the head of the river (San Carlos), and another at its mouth, the Spaniards



SAN JUAN RIVER—"El Castillo."

kept up not less than twelve military stations on its banks. The width of the river varies from one hundred



SAN JUAN RIVER—KIRKLAND'S ISLAND.

to four hundred yards, and its depth from two to twenty feet. It is interrupted by five rapids, viz., Rapides del Toro, del Castillo, de los Valos, del Mico, and Machuca. The Machuca Rapids are the longest, and, in many respects, the worst on the river. For a distance of nearly half a mile the stream is spread over a wide and crooked bed, full of large rocks projecting above the surface, between which the water rushes with the greatest violence. They are considered dangerous by the native boatmen, who are only enabled to ascend them by keeping close to the northern shore, where the current is less, and the bed of the river least obstructed. Here the *bongos* or boats are pushed up by main force. The late Transit Company lost a number of its small steamers on these Rapids, which, without great artificial improvement, must remain an insuperable obstacle to reg-

ular steam navigation on the river. The rapids of El Castillo are short, and deserve rather the name of a fall. Here the water pours over an abrupt ledge of rock, falling eight feet in but little more than the same number of yards. Bongos are unloaded here, and the empty boats tracked past by men stationed there for the purpose. The steamers of the Transit Company did not attempt to pass these rapids, the passengers and merchandise being transferred, by means of a tram-road, to vessels above. The remaining rapids, although formidable obstacles to navigation, do not require a special description. The banks of the San Juan, for twenty miles from the lake, and for about the same distance above its mouth, are low and swampy, lined with palms, canes, and a variety of long, coarse grass, called *gamalote*. Elsewhere the banks are generally firm, in some places rocky, from six to twenty feet high, and above the reach of overflows. They are every where covered with a thick forest of large trees, draped all over with *lianes* or vines, which, with the thousand varieties of tropical plants, form dense walls of verdure on both sides of the stream. The soil of the river-valley seems uniformly fertile, and capable of producing abundantly all tropical staples. Like the Atrato, the San Juan River has formed a *delta* at its mouth, through which it flows for eighteen miles, reaching the sea through several channels. The largest of these is the Colorado channel, which opens directly into the ocean; the next in size is that which bears the name of the river, and flows into the harbor of San Juan. Between the two is a smaller one, called Tauro. This delta is a maze of low grounds, swamps, creeks, and lagoons, the haunts of the manitus and alligator, and the homes of innumerable water-fowl. The port of San Juan ("Grey-



KING STREET, SAN JUAN (LOOKING SOUTH)—1854.

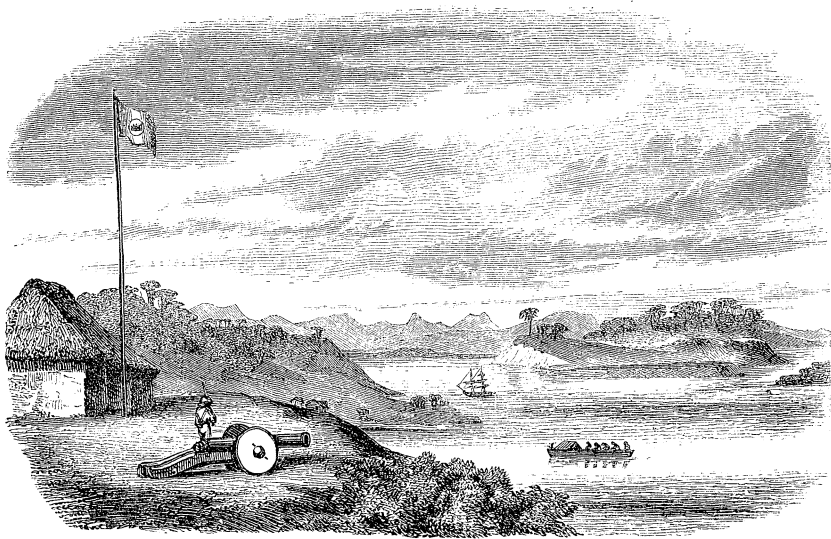


KING STREET, SAN JUAN (LOOKING NORTH)—1854.

town") derives its principal importance from the fact that it is the only possible eastern terminus for the proposed inter-oceanic canal, by way of the River San Juan and the Nicaraguan lakes. It is small, but well-protected, easy of entrance and exit, and has a depth of water varying from three to five fathoms. Upon the Pacific, the best port of the republic is that of Realejo, anciently Posession, which is capacious and secure, but difficult of entrance. The little bay of San Juan del Sur, which was used as the Pacific port of the late Transit Company, is small and insecure, and scarcely deserves the name of harbor. The same may be said of the so-called ports of Brito and Tamaranda. A good port is said to exist on Salinas Bay, but this falls on that part of the coast in dispute with Costa Rica.

Next to its great lakes, the most striking physical features of Nicaragua are its volcanoes, which bristle along its Pacific coast in nearly a right line from the Bay of Fonseca to that of Nicoya. Commencing with the volcano of Coseguina, on the north, we come in order to El Viejo, Sta. Clara, Telica, Las Pilas, Orota, Axusco, Momotombo, Masaya or Nindiri, Mombacho, Ometepe, Madeira, Solentenami, and Orosi, of which Coseguina, Momotombo, Masaya, and Orosi are said to be *vivo*, or alive. Besides these volcanic peaks, there are numerous ancient craters and vents giving forth smoke and sulphurous vapors, called *infernillos*. At the time of the conquest of Nicaragua in 1520, the volcano of Masaya, then called the "Hell of Masaya," was in active eruption. Oviedo, the chronicler of the Indies, has left us a graphic account of it as it then appeared. It has had one or two violent eruptions since that period, and, after more than half a century of quiescence, is now (1857) throwing out volumes of

smoke, and giving other evidences of renewed activity. The volcanoes on the plain of Leon, known as Los Marabios, were also active at the period of the Conquest; and as late as Dampier's time, El Viejo was a "vulcan, or burning mountain." Momotombo to this day sends out a constant spire of smoke and an occasional cloud of ashes. The eruption of the volcano of Coseguina, in 1835, was one of the most fearful on record. It commenced on the 30th of January of that year, and



PORT OF REALEJO.

continued with uninterrupted violence for four days, and then suddenly ceased. For three days the clouds of smoke and sand which it sent forth totally obscured the sun for the distance of a hundred miles. Sand fell in Jamaica, in Santa Fé de Bogotá, and in Mexico, over an area of more than fifteen hundred miles in diameter. The explosions were heard eight hundred miles, and a ship off the coast sailed for fifty leagues through floating masses of pumice, which almost en-

tirely concealed the surface of the water. Since 1835 this volcano has remained perfectly quiet, with no signs of activity except a few rills of smoke and vapor indistinguishable at a distance. The volcano of Orosi is in a state of constant activity. Besides the volcanoes themselves, and the hundred yawning craters among the hills, there are numerous lakes of volcanic origin, shut in by burnt, blistered, and precipitous walls of rock, without outlets, and often of great depth. Such is the remarkable lake of Masaya, near the volcano of the same name, and which furnishes water not only to the considerable town of Masaya, but also to the inhabitants of a number of small villages in its vicinity. In some of these volcanic lakes the water is fresh and good, in others salt and bitter. Perhaps no equal extent of the earth's surface exhibits so many or so marked traces of volcanic action as that part of Nicaragua intervening between its lakes and the Pacific Ocean.

The climate of Nicaragua, except among the mountains of Chontales and Segovia, is essentially tropical, but nevertheless considerably modified by a variety of circumstances. The absence of high mountains toward the Atlantic, and the broad expanse of its lakes, permit the trade winds to sweep entirely across the continent, and to give to the country a degree of ventilation agreeable to the senses and favorable to health. The region toward the Atlantic is unquestionably warmer than that of the interior and bordering on the Pacific, more humid, and less salubrious. The Nicaraguan basin proper, and within which the bulk of its population is concentrated, has two distinctly marked seasons, the wet and the dry, the first of which is called summer, the latter winter. The wet season commences

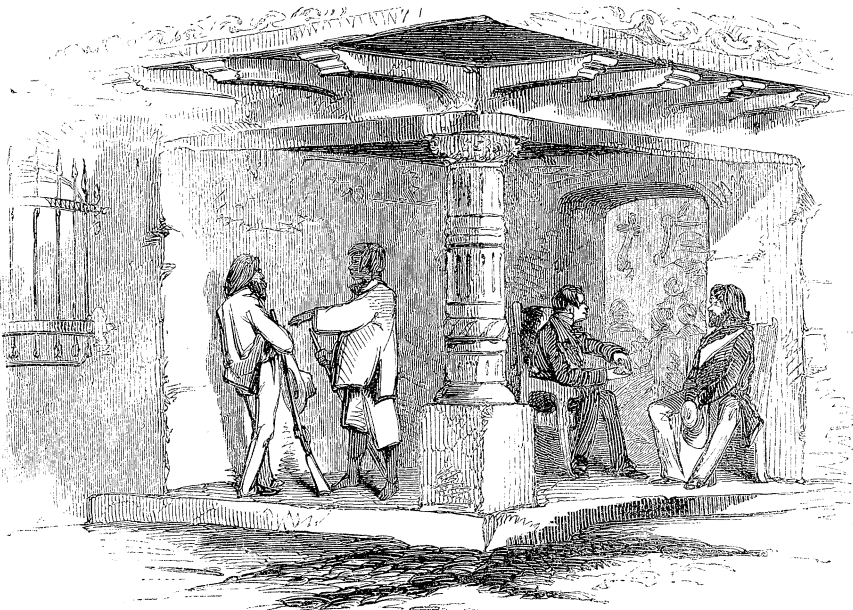
in May and lasts until November, during which time, but usually near the commencement and the close, rains of some days' duration are of occasional occurrence, and showers are common. The latter do not often happen except late in the afternoon or during the night. They are seldom of long continuance, and often days and weeks elapse, during what is called the rainy season, without a cloud obscuring the sky. Throughout this season the verdure and the crops, which during the dry season become sere and withered, appear in full luxuriance. The temperature is very equable, differing a little according to locality, but preserving a very nearly uniform range from 78° to 88° of Fahrenheit; occasionally sinking to 70° in the night, and rising to 90° in the afternoon. During the dry season, from November to May, the temperature is less, the nights positively cool, and the winds occasionally chilling. The sky is cloudless, and trifling showers fall at rare intervals. The fields become parched and dry, and the cattle are driven to the borders of the streams for pasturage, while the dust in the towns becomes almost insupportable. It penetrates every where, permeating through the crevices in the tiled roofs in showers, and sweeping in clouds through the unglazed windows. This season is esteemed the healthiest part of the year. Its effect is practically that of a northern winter, checking growth, and destroying that rank and ephemeral vegetation, which, constantly renewed where the rains are constant, as at Panama, form dense, dank jungles, the birth-place and home of malaria and death. For the year commencing September, 1850, and ending September, 1851, the thermometer, at the town of Rivas, gave the following results: Mean highest, 86.45° of Fahr.; mean lowest,

71.15°; mean average for the year, 77.42°; mean range, 15.30°. The amount of rain which fell from May to November inclusive, 90.30 inches; from December to April inclusive, 7.41 inches. None fell in February, but 22.64 inches in July, and 17.86 in October. (See Chapter II.)

The natural resources of Nicaragua are very great. The staples of the tropics, cotton, sugar, indigo, tobacco, rice, cacao, coffee, etc., may be produced in the greatest abundance. The cotton, although as yet, from lack of sufficient labor, produced in but small quantities, is of a superior quality. The cacao of Nicaragua has long been celebrated as next only to that of Socusco in quality and value. Its sugar is produced from an indigenous plant, slenderer, but containing more and stronger juice than the variety cultivated in the West India islands. Two crops, and, when the fields are irrigated, three crops are taken from the same ground annually, and the cane seldom requires to be replanted oftener than once in twelve or fourteen years. The crystals of the sugar are remarkably large and fine, and the sugar itself, when carefully manufactured, nearly equal in beauty to the refined sugar of commerce. The indigo is produced from an indigenous plant called *juiquilite* (*Indigofera disperma*, Lin.), and has a high reputation in commerce. Coffee flourishes well on the higher grounds, but is not extensively cultivated. The same may be said of tobacco, which is a government monopoly, and its production not allowed except in certain quantities. Maize grows in great perfection, and, manufactured into *tortillas*, constitutes a principal article of food. Cattle are numerous, and hides constitute a large item among the exports of the country. Dye-woods, chiefly the *braziletto*,

are also extensively exported. In short, nearly all the edibles and fruits of the tropics are produced naturally, or may be cultivated in great perfection: plantains, bananas, beans, tomatoes, yams, arrow-root, citrons, melons of all kinds, limes, lemons, oranges, pine-apples, ananas, guavas, cocoanuts, and a hundred other varieties of fruits and vegetables. Among the vegetable productions which enter into commerce may be mentioned sarsaparilla, anotta, vanilla, ginger, gum copal, gum arabic, copaiva, caoutchouc, dragon's blood, etc. The mineral resources of Nicaragua are also very great. Gold, silver, copper, lead, and iron are found in considerable quantities in various parts, but chiefly in the districts of Segovia and Chontales. The production of these metals has greatly fallen off since the independence from Spain; still, the produce is considerable; but such is the unsettled state of the country that it is impossible to obtain any satisfactory statistics concerning it. Sulphur may be had in inexhaustible quantities, crude and nearly pure, from the volcanoes; nitre is also abundant, as also sulphate of iron. Notwithstanding the variety of its products, and the ease with which they may be prepared for market, the commerce of Nicaragua is very small. The wants of its people are few and easily supplied. The people generally live in towns, many of them going two, four, and even six miles daily to labor in their fields, starting before dawn, and returning in the evening. The plantations, haciendas, hat-tos, huertas, etc., are scattered over the country, and are often reached by paths so obscure as almost wholly to escape the notice of travelers, who, passing through what appears to be a continuous forest from one town to another, are liable to fall into the error of supposing the country almost entirely uninhabited. The dwell-

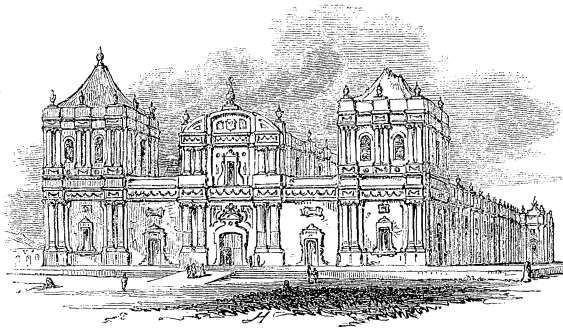
ings are usually of canes, thatched with palm, many of them open at the sides, with no other floor than the bare earth, and deserving no better name than that of huts. These fragile structures, so equable and mild is the climate, are adequate to such protection as the natives are accustomed to consider necessary. Some of the dwellings are more pretending, are roofed with tiles, and have the canes plastered over and white-washed; and there are a few, belonging to large proprietors, which are roomy, neat, and comfortable. In the towns, the residences of the better classes are built of *adobes*, or sun-dried bricks, inclosing large courts



NICARAGUAN DWELLING—INNER CORRIDOE.

faced with broad corridors. The churches, as usual in Catholic countries, monopolize nearly all there is of architectural skill and beauty. Their leading features

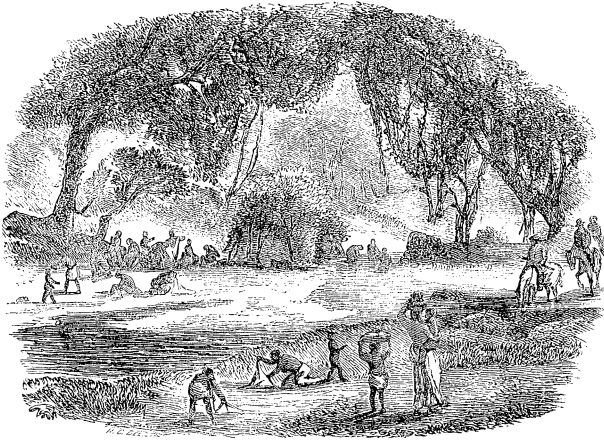
are Moresque, but there are a few, and conspicuously among them the great Cathedral of Leon, which are of simpler and more classical styles. This cathedral is of substantial masonry throughout. It was finished in 1743, after having occupied thirty-seven years in build-



CATHEDRAL OF ST. PETER, LEON.

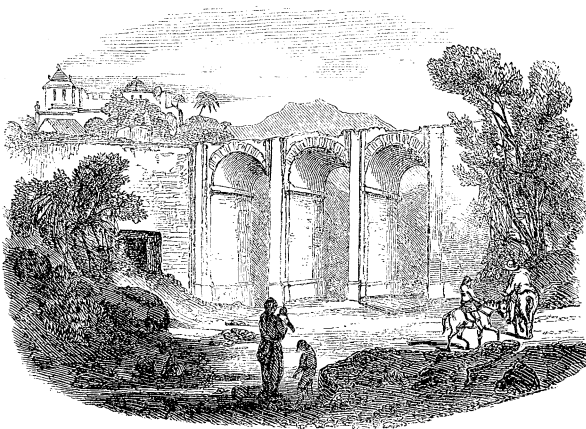
ing. The cost is said to have been \$5,000,000, or 1,000,000 pounds sterling. Nothing can better illustrate its strength than the fact that it has endured, unimpaired, the earthquakes and storms of more than a century. During the frequent revolutionary paroxysms of the country it is used as a fortress, heavy guns being mounted on the roof. As such, it has sustained several severe cannonades.

The nominal capital of Nicaragua is Managua, situated on the lake of the same name; but the largest and most important town, which was the seat of government under the crown, and which contains the principal edifices of the state, is the city of Leon, situated in the midst of the vast plain intervening between Lake Managua and the Pacific, in latitude $12^{\circ} 25' N.$, and longitude $86^{\circ} 57' W.$ Its original site on Lake Managua was abandoned in 1610 for that which it now occupies, then the seat of a large Indian town called



APPROACH TO LEON—"BARRANCA DE LAS LAVADORAS."

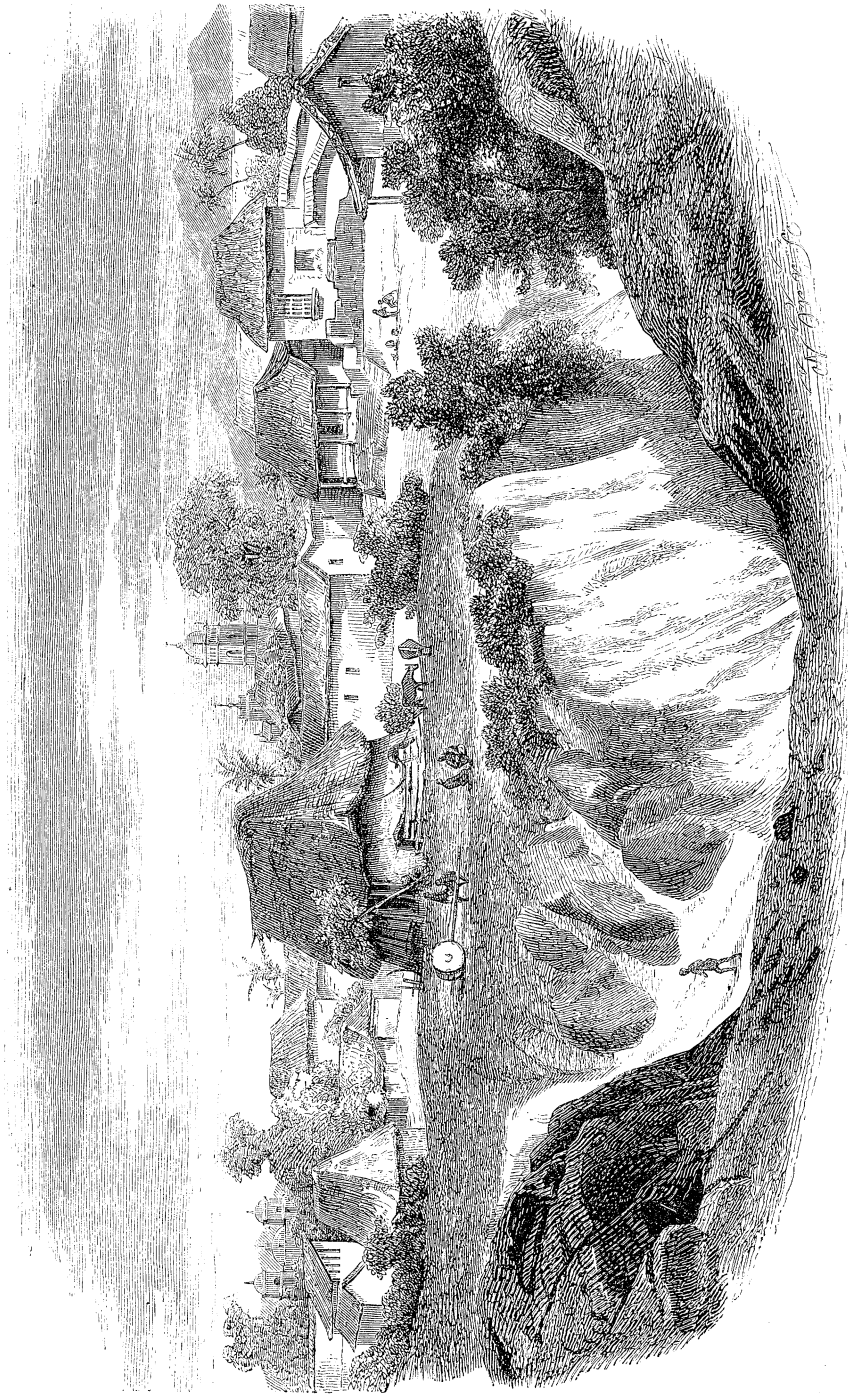
Subtiaba—a name which is still borne by a dependent Indian *barrio* or ward. Upon both sides of the city, north and south, are deep ravines, in which are a multitude of springs, forming perennial streams, whence the people draw their supply of water, and where the *lavadoras* are engaged from early dawn in their cleaning processes. The large "Barrio de Guadalupe" is situated to the southward of the city proper, the intervening *barranca* being spanned by a high and sub-



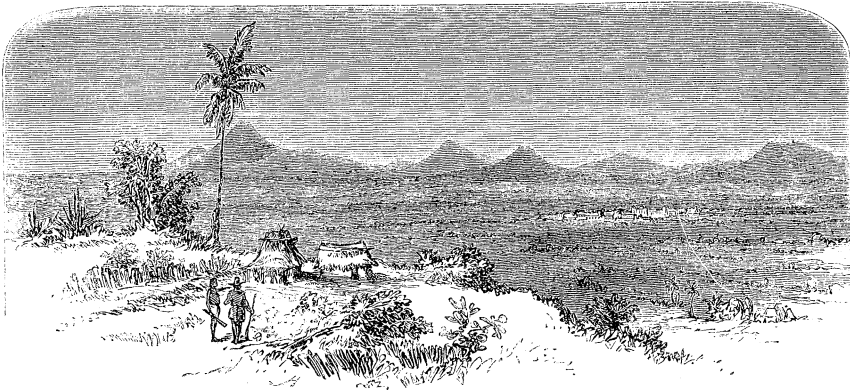
BRIDGE OF GUADALUPE, LEON.

stantial bridge, which, although commenced many years ago, is still unfinished.

During the contests between the aristocratic and republican parties which followed the declaration of independence in 1823, a large part of Leon, including its richest portion, was destroyed by fire. Over a thousand buildings were burnt in a single night, and the Cathedral is still surrounded by entire squares of ruins that were once palaces. Whole streets, now almost deserted, and overgrown with weeds and bushes, are lined with the remains of large and beautiful edifices. Within their courts stand rude cane huts, in mockery of their former magnificence. It is difficult to form an accurate estimate of the population of Leon. The census of 1846 gave 35,000, which is probably not far from the truth; but this number includes the population of Subtiaba, which is generally, but erroneously, supposed to be a town distinct from Leon. One of the finest views in the world is commanded from the hills two miles to the westward of the city. Standing on their summit, the traveler from the Atlantic sees for the first time the waters of the Pacific. To the north and east, bounding his vision in these directions, are the nine volcanoes of the volcanic range of the Marabios, their outlines sharply defined against the sky, and in regularity of form emulating the Pyramids. The volcano of El Viejo stands warder at one extremity of the range, and the gigantic Momotombo at the other. Intermediately are the cones of Axusco and Telica, the broad mass of Orotá, and the ragged craters of Sta. Clara and Las Pilas. The view probably comprehends a greater number of volcanoes in its range than any other in the world, since, besides these constituting the line of the Marabios, not less than four others may be traced in the distance—thirteen in all.



GRANADA, FROM THE WEST - 1854



PLAIN OF LEON—VOLCANIC RANGE OF MARABIOS.

Granada, until its almost total destruction by General Henningsen in 1857, stood next to Leon in size and importance. It was founded by Hernandez de Cordova in 1522, on the site of the aboriginal town of Saltaba or Jaltava, about half a mile distant from Lake Nicaragua, on a little bay which there bends its crescent into the land so as to afford a comparative shelter from the constant and often severe northeast winds. At the time of the Spanish Conquest the country around Granada, in the language of Las Casas, "was one of the best peopled in all America," and was rich in agricultural products, among which the *cacao* or chocolate-nut had the most value, and soon came to constitute an important article of export. In later times, the facilities which it possessed for communication with both the Atlantic and Pacific made it the centre of a large commerce. It carried on a direct trade with Guatemala, Honduras, and San Salvador, as also with Peru, Panama, Carthagena, and Spain. The old English friar, Gage, tells us that at the time of his visit in 1665, "there entered the city, in a single day, not less than 1800 mules from San

Salvador and Honduras alone, laden with indigo, cochineal, and hides. Two days after, there came in 900 more mules, one third of which were laden with silver, being the king's tribute." In 1854 Granada contained a population of from 12,000 to 15,000 souls, including the suburb and separate municipality of Jalteva. It had seven churches, a hospital, and nominally a University. Up to that period it had suffered far less from violence than its political rival Leon. But in a fatal hour some of its citizens became ambitious of political and military power and distinction, and succeeded in placing one of their own number, Don Fruto Chamorro, in the post of Director of the State. The means by which this was effected were somewhat equivocal, and were followed by others of still more doubtful expediency. They resulted in a revolutionary movement and a civil war, during which Granada sustained a siege of ten months, from May, 1854, to March, 1855. The city suffered greatly, but preserved its general features unimpaired until utterly destroyed by General Henningsen on the occasion of his memorable defense and retreat, in March, 1857. It is said that with the restoration of peace a great part of the inhabitants have returned, who are slowly rebuilding the town; but, situated on one side of the modern avenues of travel and trade, it is doubtful if Granada will ever rise to its former relative importance; at any rate, it has sustained a blow from which it is not likely to recover during the present century.*

* The position of Granada was so low, and its houses were so overshadowed with trees, that no general view was possible. That which is here presented was taken from the west, and conveys a very good idea of the suburbs, where the houses, however, were mean and straggling. It shows in the foreground a deep ravine, which seems to be a chasm rent originally by an earthquake, and afterward deepened by the action of water. It extends around the city on three sides, and constitutes a natural defense of no insignificant importance. In most places it is from forty to eighty feet deep, with precipitous sides.

Masaya is one of the principal towns of Nicaragua, ranking next only to Leon in respect of population. It is inhabited almost exclusively by Indians, who are distinguished for their industry and skill in the mechanic arts. They have not only extensive plantations, spreading for several miles around the town, but are also largely occupied in the manufacture of hats of palm leaf, *petates* or mats, and cordage of *pita* (agave), *albardas* (saddles), shoes, and other articles of common use. They have also several expert workers in gold and silver. They retain many of their aboriginal customs, and among others that of the *tianguetz*, or daily fair or market. It takes place an hour before sunset, when the venders of all varieties of wares, fruits, meats, etc., etc., throng to the *Plaza* or principal square, and spread out their various articles for sale. Nothing can exceed the animation of the scene. The population of the town and its suburbs has been variously estimated from 14,000 to 18,000. The Lake of Masaya and the volcano of the same name are natural features of an unusual and interesting character. The former is of volcanic origin, shut in on all sides by perpendicular cliffs, which are descended with difficulty and danger by narrow paths half cut in the rock. It is without outlet, and the surface of the water is 480 feet below the general level of the country. The supply of water for Masaya and the neighboring villages is drawn from this lake, whence it is painfully carried up by women, in jars placed on their heads or lashed on their backs. The volcano of Masaya, which rises on the western borders of the lake, into which it has more than once poured a burning flood of lava, is broad and low, and bears unmistakable signs of recent activity. At the period of the Conquest, and for many years after, it

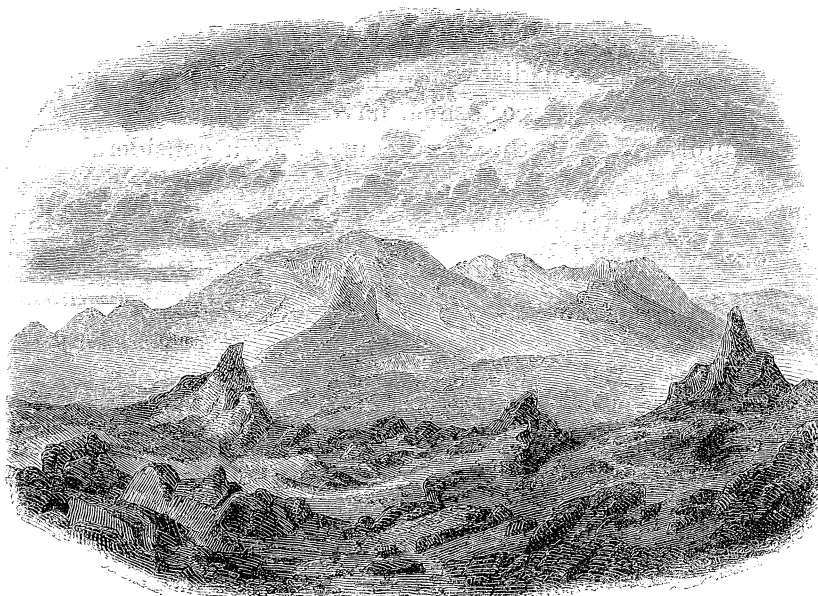


LAKE OF MASAYA.

was in a state of constant eruption, and was called *El Infierno de Masaya*. The latest eruption took place in 1670, when a vast flood of lava was poured out on its northern side, which reached nearly to the lake of Managua, twenty miles distant. The *camino real*, or main road from Granada to Leon, passes over this lava-field, which can only be compared to a vast, irregular bed of cast iron just cooled, or to an ocean of ink suddenly con-

gealed during a storm. In places the lava is rolled up in black, frowning masses; elsewhere it is piled up, flake on flake, like ice in the spring-time on the banks of our northern rivers. Here and there broad, ragged sheets have been turned completely over, as if cooled on the surface while the molten current flowed below, exposing a regular striated face, resembling the curling fibres of the oak or maple.

Managua, as already stated, owing to the irreconcilable jealousies of Leon and Granada, has been for a long period the nominal capital of the republic. In other words, the legislative chambers have been accustomed to meet here, but the officers and archives of the government have generally remained at the ancient



LAVA-FIELD—VOLCANO OF MASAYA.

capital, Leon. Its situation upon the shores of Lake Managua is exceedingly well chosen. From the lake are taken vast numbers of a variety of small fishes, scarcely longer than one's little finger, called *sardines* by the natives, but which more resemble the *white-bait* of England. They constitute a very delicious article of food, and are extensively used. The population of Managua is estimated at 10,000.

The town of Chinandega, on the plain of Leon, and of which Realejo, six miles distant, may be regarded as the sea-port, is still larger, numbering fully 15,000 inhabitants. It is one of the few towns, if not the only town in Nicaragua, which has increased in population since the separation from Spain. This has been due to the migration thither of a considerable part of the inhabitants of Leon, who, wearied of the alarms and

dangers of the political capital, have there sought a home of comparative quiet and security. It is situated in the midst of a district of incalculable fertility and agricultural resources, which have been developed, to a certain degree, by the establishment of a considerable trade with California in sugar and other products.

Rivas, or Nicaragua, situated forty-five miles to the southward of Granada, on the narrow isthmus between Lake Nicaragua and the ocean, is an ancient town, which previous to 1850 had suffered much from earthquakes, and has since suffered still more from wars and insurrections. As a town it is small and insignificant, probably never containing more than 4000 inhabitants; but it is the centre of a very rich agricultural district, thickly populated, and is surrounded at short distances by a number of considerable Indian villages, Obraje, San George, Buenos Ayres, Potosi, etc. It has become known to foreigners from its proximity to the late line of inter-oceanic transit, and from having been the scene of several most bloody and severely-contested battles in the late war between Nicaragua and Costa Rica. The climate around Rivas is deemed to be the dampest and least salubrious of that of any part of the state. A greater amount of rain certainly falls here, which is due to the proximity of the high volcanoes of Ometepe and Madeira, which stand to the windward, and intercept and condense the moisture borne along by the trade-winds from the Caribbean Sea, which here sweep entirely across the continent.

The best cacao of Nicaragua, which has a great celebrity throughout all Spanish America, is grown in the districts around Rivas and Granada. The tree producing the nut, or rather bean, is known to botanists by the generic name *Theobroma*, from the Greek, signify-

ing "food for a god." It seldom rises higher than twenty feet; its leaves are large, oblong, and pointed, somewhat resembling those of our hickory. The flowers are small, and of a pale red color. The nuts are contained in large, and, when ripe, ruddy-colored pods, measuring from four to five inches in length, and from two and a half to three inches in diameter, grooved or fluted like those of a musk-melon. Some of these pods contain as many as fifty nuts. The tree is tender, and has to be protected from the scorching rays of the sun, without being deprived of sufficient warmth for promoting its growth and ripening its fruit. This is effected by shading it, when young, with plantain-trees. At the same time, an *erythrina* is planted by its side, which, by its more rapid growth, ultimately comes to afford it every requisite protection. The plantain is then cut down, and the cacao-tree is fairly started. At the end of seven years it begins to bear, but it does not reach perfection under fifteen years. The *erythrina*, or coral-tree, called also *Cacao Madre*, or Mother of the Cacao, attains a height of about sixty feet, and at the end of March or beginning of April throws out a multitude of flowers of a bright crimson color. At this season, an extensive plain, covered with cacao plantations, is a magnificent object. Viewed from a height, the far-stretching forests of *erythrina* present the appearance of being clothed with flames.

The cacao is peculiar to America, where its nut was extensively used by the Indians before the Conquest, not only in the composition of a delicious and nourishing beverage, but also as money. It is, in fact, still used as a medium of exchange in the markets of all the principal towns of Central America, where the absence of coin of a less value than three cents makes it

useful in effecting small purchases. Formerly, and I believe still, two hundred nuts or kernels were valued at a dollar. The cacao of Nicaragua has a proverbial excellence, and has always ranked as second only to that of Soconusco, which, under the Spanish dominion, was a monopoly of the crown. Its value, even in the country where it is produced, is three or four times greater than that of the cacao of Guayaquil, which is about the only variety that reaches the United States.

As I have said, the cacao-tree is so delicate, and so sensitive to exposure, that great care is requisite to preserve it during the earlier years of its growth. It commences to bear in seven or eight years, and continues productive for from thirty to fifty years. Capital and time are therefore requisite to start an estate, but, once established, it is easily enlarged by annual additions. One man, it is calculated, is able to take care of a thousand trees, and harvest their crop. As a consequence, cacao estates are more valuable than those of sugar, indigo, cotton, or cochineal. A good plantation, with fair attention, will yield an average annual product of twenty ounces of the nuts per tree, which, for one thousand trees, equals twelve hundred pounds. At the usual market price of \$25 the *quintal* (of 101 lbs.), this would give \$300 per annum for each thousand trees and each laborer. An estate is valued at one dollar per tree.

Indigo constitutes another of the staples of Nicaragua, and the product of this state formerly commanded a higher price in the European markets than that of any other country in the world. Its production has very much declined of late years, and only a few estates, of traditional celebrity, are kept up.

Among all the varieties of palms which abound in Nicaragua, none lend a more beautiful diversity to the



INDIGO-WORKS.

forest than the coyol palm, or *cocoyol* (*Cocos butyracea*, L.). Before its stipe is developed, its leaves, varying from fifteen to twenty feet in length, bend like gigantic plumes almost to the earth in curves of exquisite grace. It produces a flower nearly a yard in length, golden in color, which bursts from a pod of richest brown, and is followed by a cluster of nuts, each of the size of a grape-shot, from sixty to a hundred in number. The shell is thick, hard, black, and capable of being finely carved and polished. It is frequently worked into rings and other ornaments by the Indians. The kernel resembles wax, but is harder, and rich in oil, which is used for domestic purposes in some parts of Central America. It is extracted by crushing the nuts, and placing them in vases of water, whence it is skimmed as it rises to the surface. It is excellent for burning, and there is no reason why it should not be extensively produced as an article of commerce. The trunk of the coyol palm is saturated with juice, which the natives obtain by cutting down the tree, plastering over

the severed end with clay, and cutting little reservoirs in the pulp, into which the juice rapidly distills. It is agreeable to the taste, and, when allowed to ferment, produces an intoxicating drink, called *chicha*, or *vino de coyol*.



CIEBA-TREE—NESTS OF THE "CHORCHA," OR ORIOLE.

The *Braziletto*, or Brazil-wood, is one of the most valuable trees of Nicaragua, and has hitherto constituted a principal article of export. Nicaragua-wood, yellow sanders, logwood, and fustic, belonging to the class of dye-woods, are also found in abundance. Among the ornamental woods, mahogany, cedar, and rosewood occur in what may be called inexhaustible quantities. There are other trees, like the *cieba* and "genisero," which attain to immense size, and constitute marked features in every Nicaraguan landscape. One of the latter variety, in the town of Nagarote, has a trunk seven feet in diameter, and a spread of over one hundred and eighty feet!

The volcano of Mombacho, written in the old maps *Bombacho*, overshadows Granada on the south. It is not as high as the more regular cones of Ometepe,



"PALO DE GENISERO" IN NAGAROTE.

Momotombo, and El Viejo, being a little less than 4500 feet in vertical altitude. The following description, written after a successful ascent in 1853, may not be out of place in this connection, as illustrating the general features of the Central American volcanoes :

"Very few natives have ever ascended Mombacho, although nearly every one has some story to tell of the marvelous lake which exists at its summit, and of the wonderful things which the traveler encounters in reaching it. I had great difficulty in persuading an ancient *marinero*, who had gone up, several years before, with the Chevalier Friedrichthal, and spent several days with him at the top, to act as my guide. The face of the volcano toward Granada is inaccessible, and we found it was necessary to go to the Indian town of Diriomo, situated at the southwestern base of the mountain, and take our departure thence.

"We accordingly made our arrangements over night, and early on the following morning, while it was yet dark, mounted our mules and started for Diriomo. We passed under the walls of the *Campo Santo*, white and spectral in the uncertain light, and struck at once into a narrow path in the forest. We could barely distinguish the white mule of our guide, who led the way, and had to trust to the sagacity of our animals to follow the road. After an hour or more of precarious traveling, day began to break, and shortly afterward we emerged from the

woods into a comparatively rough and broken country. The slopes of the volcano are cut into deep ravines, which furrow its sides, and radiate from its base. These ravines are filled with trees, bushes, and vines, while the ridges between them are bare, supporting only long, coarse grass, now crisped and yellow from the protracted heats. And as we rode on, we were one moment immersed in dark thickets, only to emerge the next on the narrow savannas of the ridges, whence we could catch glimpses of the lake, just reflecting the ruddy light which streamed above the hills of Chontales. The morning breeze breathed cool and grateful on our foreheads, and filled our lungs with an exhilarating freshness.

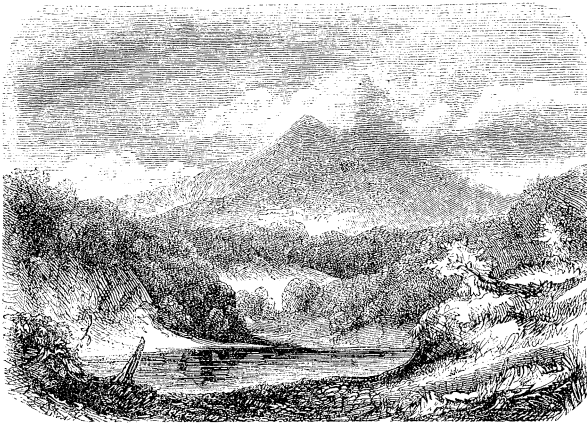
“An hour more, and we had reached the base of the high, conical hills of scoria, bare of trees, but covered with grass, which form so striking features in the scenery back of Granada. They are of exceeding regularity of shape, and seem to have been formed of ashes and scoria, ejected from the volcano when in a state of eruption, and carried here by the wind. They are, in fact, the *ash-heaps* of the volcanoes, and as they are found in greater or less numbers near every volcano in the country, they form infallible indications of the direction of the prevailing winds.

“Around these cones we found patches of cleared lands, now overgrown with rank weeds, which had been anciently estates of maize and indigo. Beyond these, the road enters a thick forest, and winds over a high ridge of volcanic rocks and lava, which extends off in the direction of the volcano of Masaya. Midway to the summit, sparkling like a diamond beneath the rocks, is a copious spring of cool water, bearing a musical Indian name which I have forgotten, where we stopped to fill our canteens and rest our mules. It is a lovely spot, arched over with trees, which the nourishing waters keep clothed in perennial green. It has been from time immemorial a favorite resort of the Indians, and the rocks around it have been worn smooth by the tread of their myriad feet.

“At the summit of the hill we came upon a figure, carved in stone, planted firmly in the ground by the side of the path. It is of the same character with the idols which I had discovered,

during my first visit to Nicaragua, in the islands of the lake, but is now used—so said our guide—to mark the boundary between the lands of the Indians of Diriomo and Jalteva. Throughout all Central America the traveler encounters piles of stones raised by the sides of the paths for a similar purpose. With the Indians, as between Laban and Jacob, they certify to the covenant ‘that I will not pass over this heap to thee, and thou shalt not pass over this heap and this pillar unto me, for harm.’

“After ascending the ridge the ground became undulating, and we came frequently upon patches of plantains, canes, and maize, which looked fresh and luxuriant as compared with vegetation elsewhere. This is due to the volcano, which intervenes in the direction of the trade-winds, and which intercepts the clouds that they bear on their wings, and precipitates them in showers under its lee; and thus, while the country at large is suffering from drought, this favored spot is cherished by the grateful rain, and retains its verdure and its beauty.



VOLCANO OF MOMBACHO, FROM THE SOUTH.

“It was scarcely nine o'clock when we reached the large but straggling village of Diriomo. But we did not stop there. Turning abruptly to the left, we rode rapidly through a broad and well-beaten path to the cacao hacienda of the family of Bermudez. It is a retired and lovely spot, commanding a fine view of the southern declivity of Mombacho. A little lake in the foreground, and clumps of trees, interspersed with patches of

dark lava, and occasional fields of reddish scoria, filled up the middle space of a picture of novel and surpassing beauty, in which the volcano rose grandly in the distance.

“Leaving the mules in charge of the *mozos* of the hacienda, we lost no time in prosecuting our expedition. Our path for two hours wound through a very broken country. At times we struggled over beds of *crinkling* lava, already hot under the blaze of the sun, and then plunged into thickets of dwarfed trees, to emerge, perhaps, upon an arid slope of cinders and scoria, supporting only the dry spikes of the *maguery* or agave, and clusters of the spiny cactus.

“Finally, we began the ascent of the mountain proper. Upon this side the walls of the crater are broken down, exposing a fearfully-rugged orifice, in the form of an inverted cone, walled up with black and forbidding rocks, which seemed to frown angrily upon our approach. The summit now looked twice as high as it had done before, and we strained our eyes in vain to discover the semblance of a path among the jagged masses of lava and volcanic stones piled in wild disorder on every hand. Two of our party, appalled by the difficulties which presented themselves, decided to forego the pleasure of witnessing a sunrise from the summit, and the prospect of broken necks or shattered limbs in reaching it, for a quiet night in a comfortable hammock at the hacienda. So we drained their canteens for them under the shadow of a large rock, and separated.

“From this point our ascent was simply a fatiguing scramble. Now clinging to rough angular rocks, anon grasping at the roots and branches of gnarled and scraggy trees, or painfully struggling over steep slopes of ashes and volcanic sand, which yielded beneath the feet, we toiled slowly up the mountain, the summit of which seemed to lift itself higher and higher in the air, while the clouds rushed past it with dizzy velocity. The sun, too, shone down upon the arid declivities with fervent heat, and the radiations from the blistered rocks fairly seared our eyes and blinded our sight. At the end of two hours we had gone up so far as scarcely to be able to distinguish our friends below us, and yet, as we gazed upward, it was impossible to discover that we had made any perceptible progress in our ascent.

“Still we kept on and on, tearing our hands and bruising our limbs in our eagerness to reach the summit before the setting of the sun. At three o'clock we were brought to a standstill by the sudden fainting of Señor Z——, a young gentleman of Granada, who had volunteered to accompany us. Fortunately I saw him stagger, and was able to catch him in my arms before he had lost all consciousness. A moment later he would have fallen among the rocks, and inevitably have been killed. He soon recovered from the attack, and, after resting a while, attempted to proceed. But his efforts were feeble, and another recurrence of faintness, and indications of a suffusion of the brain, rendering it evident that he could neither go on nor return that afternoon, there was but one alternative left, and that was to encamp where we were for the night. But he would not listen to the proposition, and insisted on being left with the guide until our return. So we led him to a cleft in the rocks, where he was sheltered from the sun, and, supplying him with water and food, bade him farewell, and continued our ascent.

“The lead, now that we had lost our guide, devolved upon me. It was a position of some responsibility, for the mountain was here rent in numerous deep rifts or chasms, some of which were hundreds of feet deep, and it was difficult to select a course which should avoid them, and yet conduct us toward the top of the mountain. Besides, we had now reached the region of clouds, which often obscured the summit, and enveloped us in their dark and damp, but refreshing folds. While they were passing we could not move, for a single incautious step might now be fatal.

“I had directed my course toward a high angular peak, which to us seemed to be the highest part of the mountain. But when, after prodigious toil, we had attained it, I found that it was only one of the broken lips of the crater, and that the true bulk of the mountain lay far to the left, separated from the point on which we stood by a deep cleft, which could only be passed by descending the rocks again for the distance of nearly a thousand feet. This was a severe disappointment in some respects, yet we felt glad that we were not obliged to pass the night there. Before retracing our steps, I crawled cautiously

to the very edge of the rock. It overhung the ancient crater, which yawned like a hell beneath. I recoiled with a shudder, but not until I had observed, at the very bottom of the rocky gulf, a little lake of water, which gleamed brightly in its rough setting.

“After regaining the body of the volcano, we came upon a comparatively smooth slope, supporting a few bushes and a little hardy grove, and, just before sunset, after passing several small craters and ancient vents, succeeded in attaining the summit of the mountain.

“I had abstained from looking around me while ascending, anxious to witness the glorious prospect which I knew must open upon my vision there in all of its vastness and beauty. Worn, weary, bruised, and bleeding, yet that one sublime view compensated for all. Language can faintly picture it. The great Pacific, all golden under the setting sun, spread away boundlessly in the west; and Lake Nicaragua, its glowing waters studded with islands, lay motionless at our feet. Beyond it rose the umber-tinted hills of Chontales, and still beyond these, rank on rank, the high, blue ranges of the silver-veined Cordilleras of Honduras. I turned to the southward, and there, piercing the clear air with their lofty cones, towered the graceful peaks of Ometepe and Madeira. And yet beyond these rose the volcano of Orosi, with its dark banner of smoke trailing away, league on league, along the horizon, and tracing an ebon belt across the gigantic bulk of cloud-crowned Cartago, proudly dominating over both great oceans. To the northward the view was equally varied and extensive. There, cradled among hills of eternal green, spread out the large and beautiful Lake of Managua. At its further extremity loomed the high volcano of Momotombo, watching, like some gigantic warder, over the slumbering waters; and more distant still, terminating the dim perspective, were the receding peaks which bristle around the plain of Leon. And, apparently at our feet, although ten miles distant from the base of the mountain, stood the broad, low volcano of Masaya, in the midst of a wide expanse of lava-fields, which, rugged and black, strongly contrasted with the adjacent forests and cultivated grounds. The white church-



VOLCANO OF MOMBACHIO—VIEW OF PRINCIPAL CRATER.

es of Granada and of the surrounding villages appeared like points of silver in the slant rays of the sun. Rarely, indeed, has the eye of mortal looked upon a fairer scene.

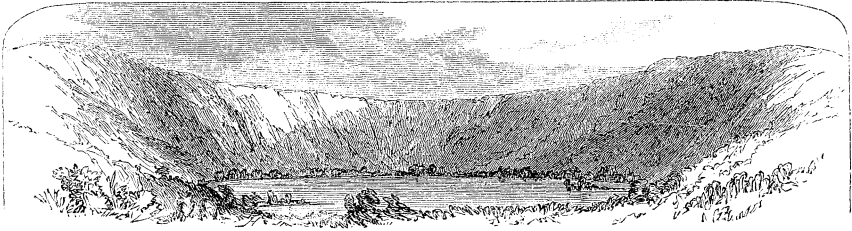
“But as we gazed with unwearying delight, the sun declined, and broad purple shadows crept over lake and plain, while every peak and mountain shone with increased brightness, like fairy islands in some enchanted sea. Soon the shadows began to invade their slopes, mounting higher and higher, and wrapping them one by one in their cool embrace. At last only the topmost crest of Ometepe and Madeira were left, and around them the sun’s rays dallied, as a lover dwells upon the lips of his mistress, in fond and lingering adieus.

“The glow and the glory passed, and the stately night descended in her glittering robe; and then, face to face with the stars, we wrapped our blankets around us, and lay down upon the bare earth. The silence was profound and almost painful, and deepened rather than disturbed by the subdued and distant, but distinct pulsations of the great Pacific. Suddenly we heard the bells of Granada chiming the passing hour. The sound was almost startling from its apparent nearness, yet softened and harmonized in the rarefied atmosphere so as to resemble the swelling notes of the *Æolian* harp when struck by a sudden breeze.

“The early part of the night was deliciously cool, but toward morning we were all awakened by a cold mist, which settled upon the top of the mountain, covering the rocks with big drops of moisture, and which was not dispelled until long after the sun had risen above the horizon.* We thus lost the principal object of our visit, but consoled ourselves with the reflection that our imaginations could picture nothing more glorious than the sunset of the preceding evening. It was past ten o’clock before we were able to extend our vision beyond the little circle within which we stood, or advance toward the eastern declivity of the mountain, where an abrupt depression and the cries of birds seemed to indicate that we should find the lake of which we had heard so much. We were not disappointed, for we

* At dawn the thermometer marked 65° Fahrenheit, while at Granada, at the same hour, it stood at 79°, a difference of 14°.

came suddenly upon the edge of one of the subordinate ancient craters, or lava-rents of the volcano. It was not so deep as the others we had seen, and its gently converging sides were covered evenly with grass. It was, to borrow a homely comparison, a beautiful saucer-shaped depression, something more than a quarter of a mile broad, and about two hundred feet deep. At the bottom slumbered a small lake, fringed round with trees



CRATER LAKE.

and bushes, loaded with vines, which drooped over the water in luxuriant masses. Among the trees were a few *coyol* palms, dwarfed, but otherwise flourishing. But most remarkable of all, growing between some loose rocks, and partly shadowed over by other trees, were several tree-ferns—the first we had seen in Nicaragua. I never met with them elsewhere in Central America, except in the great *barranca* of Guaramal in San Salvador. Their tender leaves seemed translucent in the rays of the sun, and as ethereal and delicate as the tracery of the frost on our Northern window-panes. Among the trees, and occasionally glancing out and in, were hundreds of noisy paroquets. As we advanced, a troop of Indian conies, a species of hare common to the tropics, suddenly lifted themselves on their hind legs above the grass, looked at us in evident amazement for an instant, and then scampered off for the covert. I fired at them fruitlessly with my revolver. The effect of the discharge was marvelous. A cloud of paroquets rose above the trees, and darted in wild confusion around the ancient crater. A couple of ravens, which we had not seen before, also rose and circled over the pool, uttering their harsh, discordant croaks, and a number of toucans fluttered heavily from one tree-top to another. In fact, all that there was of life in that secluded

spot seemed to have been frightened into wild activity. We were ourselves a little startled by the sudden rustle of wings.

“But soon the tumult subsided, and the frightened birds again entered their leafy coverts, whence they watched us in silence. We endeavored to penetrate the thicket around the little lake, but it was so matted together with vines, and the soil withal was so marshy, that we gave up the attempt, and contented ourselves with making a cup of grateful coffee beneath the shadows of an overhanging tree. By barometrical measurement I found this mountain lake to be 4420 feet above the level of the sea.

“About noon, after taking a final survey from the summit of Mombacho, we commenced our descent. This was more rapid and less fatiguing than our ascent, but more dangerous. We were far more alarmed in getting down some of the rocky and almost perpendicular declivities than we had been in surmounting them. Once or twice, indeed, we could scarcely persuade ourselves that we were returning by the same path we had ascended. Nevertheless, without any greater mishap than the usual one attendant on such adventures, of breaking our barometer, at two o'clock we reached the place where we had left our exhausted companion. To our surprise and momentary alarm, he was gone; but after a little search we found a scrap of paper beneath a little pile of stones, informing us that his night's rest had restored him, and that he had availed himself of the freshness of the morning to return. Thankful that we were not to be embarrassed by a sick man, we continued our descent, and at sunset were seated to a cup of fragrant chocolate beneath the hospitable corridor of Bermudez.”

The northern districts of Nicaragua, although in many respects the most interesting, are in reality least known. They comprise the departments of Nueva Segovia and Chontales, bordering on Honduras, and, in fact, constitute part of the great central plateau of that state. In common with the other parts of that plateau, they are comparatively cool and salubrious, well

watered, abounding in minerals and the precious metals, and producing many of the fruits of the temperate zone. Segovia is very sparsely populated, and but an insignificant portion of its surface has been brought under cultivation. The principal occupation of its inhabitants is mining. Silver ores are most abundant; the ores of gold are common, and there are streams in which the Indians carry on gold-washing, but in a rude way and on a small scale. Copper and the inferior metals are also found in quantities which, in other countries and under different circumstances, would contribute greatly to the general wealth. Chontales is described by Chevalier Friedrichsthal as having, "in general, an alluvial soil, being an undulating country, without any very determinate character, furrowed by gullies and narrow runs of water, and dipping generally to the southwest. Porphyry appears but rarely on the surface." It is chiefly a grazing region, but has lately obtained some notoriety from its mines of gold. Recently, it is alleged, coal has been discovered. The large river Escondido (called Bluefields on the English maps, and known as Lama by the people of Segovia, and as Siquia by the Indians) flows through this department.*

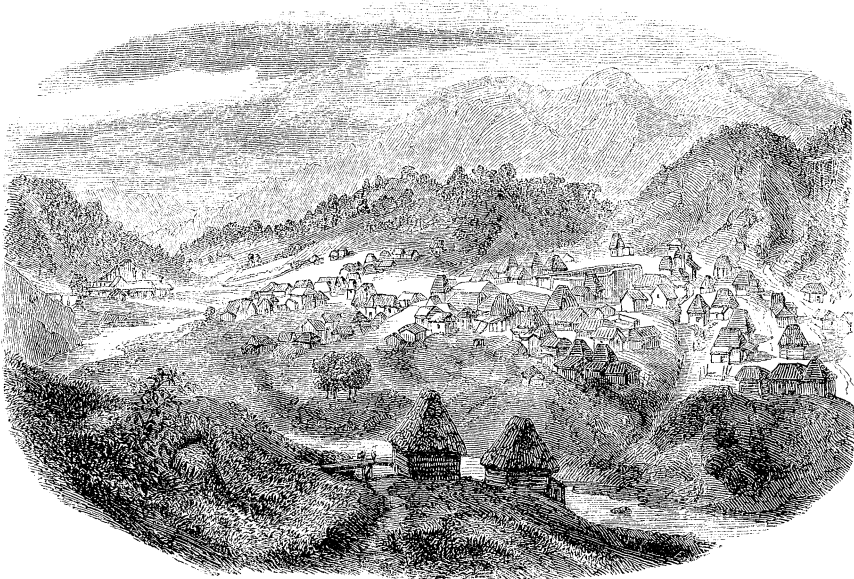
* "Chontales is entirely a grazing and cattle-raising country, divided into extensive cattle-farms (*haciendas de ganado*), which yield very small profits. I visited one of these haciendas, in the most splendid situation. It contains about 17,000 acres of land, with 5000 head of cattle, and the whole income of this property is \$800 a year. Some 25 miles distant from Acoyapa, and about as much from the little town of Juigalpa, on the head-waters of the Rio Mico, which runs down into the Blewfield River, gold mines are situated, which are worked in the most awkward manner by a native company. I passed the mountain ridge, and paid a visit to the Indians living on the high prairies on the other side, of whose language I gathered a small vocabulary, which is of a good deal of ethnological interest. This people, though armed with formidable bows and arrows, appear to be of a mild and timid temper. I was told that there were 400 men fit for bearing arms living on the Rio Mico. They have their chief, to whom they gave the title of *Capitan*; and those I visited, at least their old men,

In case emigration from the United States or Europe should ever take the direction of Central America, there is no doubt but the elevated districts of Honduras and Segovia would become rapidly populated, and rise to be among the most important sections of the entire country; and had the several European attempts to plant settlements in Central America been made here, instead of on the low, hot alluvions of the coast, it is probable they would have escaped the complete and disastrous failures which have overtaken them all.

The principal towns in Nueva Segovia are Ocotal, Matagalpa, Jalapa, Acoyapa, and Depilto. The latter is a mining town in the centre of a rich mineral district. Six leagues distant are the mines of Marquili-sa, lately worked by citizens of the United States. There is here a fine stream, with thirty feet fall, capable of carrying extensive machinery. The other mines best known are those named Mina Grande, de San Albino, Santa Maria, Santa Rosa, Esquipulas, Limon, and Agua Podrida.* In respect to the general min-

knew how to express themselves pretty well in Spanish. They are not mere hunters, but cultivate little spots of ground, raising some corn, different roots, sugar-cane, bananas, and other fruits; and some of them are servants in the houses of their Nicaraguan neighbors, with whom they live in the best understanding. The latter, indeed, are entirely without the religious fanaticism of the 'Conquistadores,' and have no objections at all to have a servant who goes to dance with his god in person once a year ('están ballando con su dios de ellos')." —*Jules Froebel*, 1851.

* "Mining in Segovia is carried on in a very rude manner. The miners follow the vein in an irregular way, up and down, right and left. Occasionally there is in the mine a *poso*, or breathing-place. These are generally about forty-five feet deep, having a perpendicular log, with cuts on each side, on which the workmen climb up and down like monkeys, each carrying about 100 or 120 pounds of ore in a leather bag hanging from a strap across his forehead. There is not in all the mines such a thing as a regular shaft through which to raise the ore to the surface. They are, accordingly, very shallow; a depth of thirty feet is considered enormous, and most of the mines are for this reason abandoned. The workmen sit down on the hard ground naked, and a tallow candle stuck in the



MINING TOWN OF DEPILTO, NUEVA SEGOVIA.

eral wealth of this department, I am, fortunately, able to present the following reports, addressed to me in

rock above them gives light to their work. Arrangements for pumping out the subterranean water have been unknown till recently. None of the miners are capable of telling how far they are below the ground, and, in a word, the whole work is carried on pretty much after the fashion of the moles. As some of the mines are five or six miles from Depilto, the ore is carried there on mule-back to the *ingenio*, or grinding-mill. This is a curious affair. It has a horizontal wheel about 15 or 20 feet from the ground. Across the vertical axle of this wheel are two beams, each some 25 feet long, forming a cross, and on the end of each is a stone weighing from 1000 to 1500 pounds, which, when the wheel is moving, describes a circle, and so grinds the ore. A little stream washes the ground ore as through a sieve. It is then collected in a reservoir, and the silver is extracted partly in the well-known way by fire. The poorer ores are worked after the old Spanish fashion on the *patio*. This is a large space covered with thick planks laid close together. On this the ore is deposited in heaps of 1500 to 2000 pounds, mixed with salt and quicksilver, and trodden with water; it is then exposed for one or two weeks to the sun, after which the same process is repeated three or four times. At last the amalgam is washed out, the quicksilver evaporated under a copper cover, and the silver which remains is purified from the small quantity of copper which it contains. This mode is abandoned, as the expense of quicksilver is too great. Recently, amalgamation has been tried

1850, while residing in Leon de Nicaragua, and a letter written, in reply to some inquiries of my own, by a gentleman recently engaged in mining in that district.

Report on the Gold-washings, and the Mines of Gold and Silver, which exist to the east of this City (Ocotal), on the Main Road to Jalapa.

“1. At the distance of two leagues and a half from this city are the ravines (*quebradas*) of Chachaguas, with gold dust mingled with the sand.

“2. On the same road to Jalapa, at the distance of four leagues from this city, are the ravines of Salamaji, containing several gold-washings, yielding gold in considerable quantities, and of superior quality.

“3. In the same direction, six leagues from this city, is the ravine of Alali, gold-washings worked by the Güirises, and

with success, after the ore has been roasted in an oven. It is then amalgamated with quicksilver in moving barrels, after which washing and purifying take place as in the *patio*. The mines of Depilto are rich, no doubt, and the locality most favorable for profitable mining. The river furnishes, through the whole year, a considerable water-power, and fuel is supplied in abundance from the pine woods for the price of cutting it. Workmen can be had at the low rate of twenty cents a day. Still, it will be some time before the mines will be in a flourishing state. The greatest drawback to a rapid development is the bad state of the roads, and the immense difficulty of importing good engines, which must be brought on mule-back or on the shoulders of men. Another impediment is the difficulty of finding good, steady workmen, the Indians being the only ones that are employed. They will never work so long as they can buy *aguardiente*. Often, instead of coming to work on Monday, they appear at the mine on Thursday. The only way to keep them at work is to advance them a few dollars, after which the proprietor of the mine has the right to bring them by force to work, even if it be from the death-bed of a child.

“The ore in the mines of Depilto and Marquillisa (another mining place, one day's journey distant) is mostly sulphuret of silver. Silver and antimony are found; sometimes silver with a little copper; seldom pure silver. The latter is more frequent in the mountain region, nearer to the lake shores. There is a considerable mining district at Somote Grande, about one day south from Depilto, another at Juigalpa, one day northwest from the little isthmus of Tipitapa, between Lake Nicaragua and Lake Managua. In the northeastern region are rich gold mines, no doubt less rich than in California, but yielding very satisfactory results. There, and in Honduras, gold appears in clay-slate, distributed in little lumps.”—*William Heine*, 1852.

whence the neighbors of the valley of Arrayan have constantly obtained large quantities.

"4. Eleven leagues from this city is the ravine of Leones, where there is a gold mine; gold-washings also exist here.

"5. Sixteen leagues from this city is the rich silver mine of Limon, from which has been taken much native silver. It is now filled with water.

"6. Returning from Limon, and taking the road to the left toward Jicaro, before arriving at Muyuca, at the distance of seventeen leagues from this city, is to be found a vein rich in shining metal, but which has not yet been assayed. It is called Higuera.

"7. Following the road to Jicaro, in the vicinity of Sabana-grande, twelve leagues from this city, is the mine of Macuelisito, rich in silver ore.

"8. Taking a course to the right from here, and fourteen leagues from this city, are the mines of Santa Albino, and in their vicinity those of Tirado, both of gold.

"9. From this place to the left, on the road to Ciudad Vieja (old Segovia), twenty-seven leagues from this city, is the ravine of Quilali, whence the Güirises have taken considerable quantities of gold dust of superior quality.

"Ocotal, October 1st, 1850.

"MIGUEL ARTOLA.

"BENITO PEÑA.

"FRANCISCO IRIAS."

Addition to the above, by Don Gregorio Herrera, living in the Valley of Arrayan.

NAMES OF RAVINES AND STREAMS.

"1. *Chaguite*—Gives large grains of gold in abundance, and of good quality.

"2. *Perillos*—Abundant in the same class of metal.

"3. *Quebrachos*—Good gold, but in smaller grains, and less abundant.

"4. *Javonera*—Gold abundant and good.

"5. *Rio de Alali*—Carries gold, and on the banks are five mantos (banks or placers) of the same metal.

- "6. *Ravine San Lorenzo*—Gold in large grains abundant.
 - "7. *Ravine Zapote*—Like the above, with two placers.
 - "8. *Rio Apali*—Carries gold, and has a placer.
 - "9. *Ravine Santa Albino*—Like the above, and near it many abandoned works.
 - "10. *Ravine Almorzadero*—Rich in good gold.
 - "11. *Ala de Quilali*—Here are three small ravines, carrying much gold, and two placers.
 - "12. *Rio Jicaro*—From the direction of Quilali, three ravines, with gold.
 - "13. *Rio Santo Pablo*—Has much gold, and abundant supplies of food.
 - "14. *Ravine Las Cucharas*—Here runs the Yauli into the Rio Jicaro, with gold of good quality in abundance.
 - "15. *San Francisco*—Three ravines, with abundance of gold.
- "From Ocotal to the most distant ravines, the distance, more or less, is twenty-five leagues. From the above it appears that there are twenty-one gold-bearing streams and ten placers.

"F. D. ZAPATA."

"New York, April 12th, 1854.

"DEAR SIR,—In answer to your letter regarding the Department of Segovia, in the State of Nicaragua, I would say that I have resided there for nearly three years, and that its mineral wealth is very great.

"On leaving the city of Granada for that department, the road lies through a low plain, covered with the mahogany and other valuable trees, for the distance of twelve leagues, until you arrive at the town of Tipitapa.

"This town is on the river of the same name, which is the outlet of the Lake of Managua. It is a small place, inhabited by a dark population. There is a boiling spring here, near the falls of the river.

"After crossing the river, the road runs along its borders through a dense forest, with a very rich soil. Here is found the logwood (Nicaragua wood) in great abundance.

"Two leagues from Tipitapa is the hacienda of San Ildefon-

so, a large cattle estate. The land from this point begins to rise. After passing three other large haciendas, the first difficult ascent is found. It is an abrupt hill, very toilsome for mules, covered with small stones made round by their passage. On reaching the top of the hill, the country opens into a large plain, covered with *guacal* trees. The soil of this plain is a black clay, very difficult to pass in the rainy season. In the summer it is dry and destitute of vegetation.

“The hacienda of La Concepcion completes the second day’s journey, being fourteen leagues from the town of Tipitapa.

“From La Concepcion to the town of Chocoyas is eight leagues, over the same plain, covered with broken lava. One league from Chocoyas the road crosses, by a ford, the large river of Matagalpa.

“Chocoyas is a large old Spanish town. In the Plaza are the ruins of a large church, commenced many years since, but never completed.

“In the hills which surround the town many veins of gold and silver ore have been found, and in the gulches near are very beautiful white carnelians.

“Magnetic iron ore is also found near this place. The road, after leaving the town, crosses the same river. The character of the country is the same, being a perfectly level plain for about six leagues, when the land rapidly rises, till the town of La Trinidad is reached. This is a beautifully-situated place, lying in a lovely valley, surrounded by the most fertile land in the world. To the right are the gold mines of Jicora. From La Trinidad the ascent is very abrupt for about four leagues, when the table-land is again reached. The distance to the town of Esteli is seven leagues.

“Esteli is a little town in a small plain, through which winds a river of the same name, which empties in the Lake of Managua. There is a grist-mill here, and the country produces considerable wheat, of medium quality. There are large quantities of wild silk in the forests, and many veins of silver ore have been found in the hills. From here to the hacienda of Abandon the land rises in abrupt ascents, alternating with table-lands, producing the best grass in the state. From this hacienda the

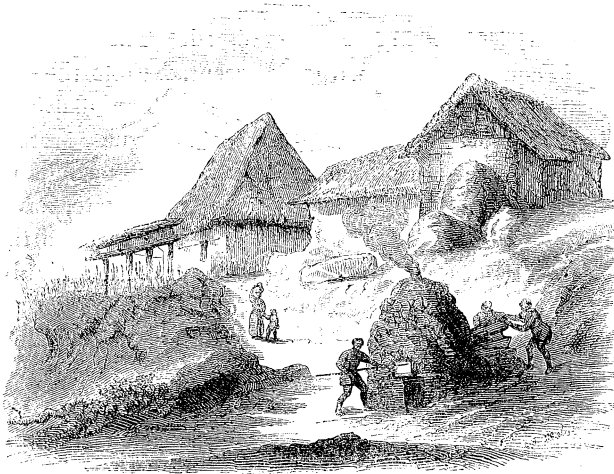
land again rises, and, on attaining the summit, a lovely plain of about three leagues in length is crossed. The descent from the plain is equally abrupt with the ascent. From the summit the volcano of Momotombo is plainly seen. The road then follows the River of Condega for about six leagues, crossing it thirteen times, until the pretty town of the same name is reached. This is one of the finest towns in the state, having a church and many good dwellings. From this place to the Indian town of Palacaguina is two leagues, through a highly fertile country. From Palacaguina to Totogalpa is four leagues; from Totogalpa to Marquilisa is seven leagues. This town is the centre of the mining district in the state. In every direction around it the hills are filled with silver and gold ore. Within a circuit of three leagues there are over fifty veins of silver ore known. These have not been explored, as there is no capital here to carry on any works of the kind. Copper mines have also been found near.

“There is a fine vein of iron ore, and also a tin mine, in the vicinity. Seven leagues from Marquilisa is the town of Depilto. Here are the works of Don F. Paguaga and Don Felix Cerra. They have several very valuable mines, and in the town and in its vicinity are over a hundred of the best veins known. Copper ore is also found, though not to the same extent.

“Respectfully yours,

J. S. BRADBURY.”

Several large streams, flowing into the Atlantic, take their rise in Segovia. The largest of these are the Rio Escondido, running along the base of the range of mountains which shuts in the basin of Nicaragua on the north, and the Rio Coco, Wanks, or Segovia, which, for the greater part of its course, constitutes the boundary between Nicaragua and Honduras. It flows into the Atlantic at Cape Gracias á Dios, in latitude 15° N. Neither of these streams is well known. From all accounts, with the exception of the parts flowing through the alluvions and level lands of the coast, they are rapid, and the navigation is impeded by rocks and falls.



SILVER SMELTING — DEPILO.

Canoes and piraguas, nevertheless, do ascend both, almost to their sources, but always with difficulty.

I have in my possession an original letter from Don Francisco Irias, who descended the Rio Wanks in 1842. He observes that it has several large tributaries, the Coa and Poteca from the north, and the Bocay and Pantasma from the south, and proceeds:

“I pass now to describe the rapids, which commence at the place called Pailla. They are, *Gualiquitan*, which has a strong current, and a broken, narrow channel between the rocks, but which may be passed without the least danger. *Ulacuz*, which is similar, but also without danger, abounding in water derived from the great river Ulacuz, which falls from the right, from fearful (*espantosa*) mountains, in my opinion extending to the southeast. *Guascuru* has its rapids, which, though somewhat abrupt, are without risk in the passage. *Quiroz* is similar, although there is a fall before arriving to it, around which, however, nature has formed a canal, so that the navigation of the river is uninterrupted. *Turuquitan* is a rapid or narrows, which is only dangerous for the transportation of cattle, on account of a great rock in the middle of the stream, upon which, if the

rowers are not dexterous, the rafts are sure to run. But accidents are rare, inasmuch as the oarsmen are accustomed to this kind of navigation from their youth. *Suginquitan* is another unimportant rapid. At *Crantara* the current is strong, but the passage is entirely practicable, as is also the case at *Pistalquitan*. The rapid of *Cairas*, at first sight, terrifies the voyager with its rushing, foaming, and tumultuous waters, yet does not prevent his passage, for nature has also here provided marvelously for overcoming the difficulty, and made a side canal before arriving at the dangerous point, by means of which the boats can be passed by the oarsmen in an hour with entire safety. *Tilras* and *Quipispe* are the final rapids, and are unimportant.

“These are the sole obstructions to the navigation of the river from the point of embarkation to the sea, at Cape Gracias á Dios. At present the descent occupies about ten days. Two days are taken up in descending the rapids here described, and four in ascending them. It will be observed that only about a fifth part of the river is in any way obstructed. The delay in the voyage is chiefly occasioned by unloading and reloading at some of the points above mentioned. From the last-named rapids to the Cape there is scarcely any current, and it is necessary to use the oars. This part of the country through which the river passes is very beautiful, being composed of open plains covered with grass and scattered trees. It is a section well adapted to raising black cattle and horses, as also to the introduction of colonies, which in a few years could attain to prosperity and riches upon its virgin soil in cultivating its numerous valuable fruits, and in consequence of its proximity to the Cape and the Great Antilles, affording easy means of exportation and a market. Mules and horses may here be raised in the greatest abundance, and profitably shipped to Cuba, Jamaica, and other points where most valued.

“It is lamentable to find so beautiful a coast with no other population except a few *Moscós* (Mosquitos), unable from want of education, as unfitted by disposition, to attain to any improvement in the future. I will endeavor to give some idea of their savage situation and customs. Most of them subsist by

hunting and fishing, and a very few by a rude and petty agriculture, planting, in little patches on the borders of the river, small quantities of plantains, yucas, sweet cane, and cotton, the last of which is rudely spun and woven by the women in the form of blankets, sails for their canoes, strings for their bows, and netting for feather-work. Some of their feather-work is quite beautiful. They make a kind of cloth of the bark of a tree, called *ule*, which serves for dress and for covering at night.

“They celebrate the anniversaries of the death of their parents or friends with most doleful and unharmonious songs and wailings, which are enough to put the timid traveler to flight. This mourning or lamentation is chiefly performed by the women, under a tent of *ule* bark. Some perform the ceremony walking backward and forward for the distance of about one hundred yards, in the following manner: they advance four or five steps, and then fall flat on their chest and face with a force apparently great enough to kill themselves, repeating the same barbaric ceremony until the night closes. Some paint their faces with *achiote* or *tile*, and, though they exhibit some skill in this, most are rendered horrible from the operation. They are all very much addicted to strong drinks, and when a dram is given them they exhibit great satisfaction, and endeavor to return some article which their situation enables them to give; but this is done on the moment, and the favor is soon forgotten.

“They appear kind, and exert themselves to please strangers who may visit their huts; for, though there are among them some bad and disorderly Indians, yet there are very few who will offer any violence to the traveler, principally, however, on account of the fear in which they stand of their chiefs, to whom they pay great deference. For any fault of obedience or any crime they are severely punished, so that traders may carry on their traffic with little fear of insult or injury. They are fond of dances, for which they provide fermented liquors of cane-juice and yuca in great abundance, and when the day fixed upon arrives, a great number of families collect, all having their faces fantastically painted. When they are gathered, two designated dancers open the ceremony, appearing suddenly from the depths of the forest, where they are previously hidden, dressed in palm

leaves, and painted of various colors. These extraordinary figures enter a square covered with *pacaya* leaves, where they dance a whole day, joined by many people. Meanwhile, most of the guests remain in or about the hut of their host, drinking eagerly the fermented liquors, which, being strong, soon upset them, producing violent vomiting. Upon recovering a little, and the sun somewhat declining, the males form their dance apart from the women, making use, as instruments of music, of a dull-sounding drum, and of some great, hoarse-sounding pipes of hollow reeds, the noise of which is frightful, accompanied by some small pipes, to the measure of which rude instruments the musicians as well as the people dance until nine or ten o'clock at night. The women, also apart, commence their dance at eight o'clock at night, and continue until five in the morning. They form a right line, each taking the hand of the other, occasionally separating and shaking a rattling gourd, to the sound of which, accompanied by a low chant, they dance. It can hardly be said that any of these dances are worth seeing; but it is certain that, in spite of their extravagance, they do not fail greatly to amuse the civilized spectator.

“Some of these Moscos (Mosquitos) raise a few mares, and some cows, besides which they have a little commerce with Belize, from which place are brought a little clothing, iron pots, guns, axes, and other articles, which are carried to different points in the valley of Pantasma, the old Look-out, and to the town of Talpeneca, where they are exchanged for calves of one or two years old, which are carried in *balsas* (rafts) down to the coast.

“The chief or ‘king’ who at this time governed these savages was a man of small stature, thin, with an aquiline nose, dark color, descended from *Xicaque* and *Mosco* ancestors, and had some education. His residence was generally upon the banks of the river. He was hospitable to the voyagers, inviting them to his hut, and feasting them to the best of his ability while they remained with him. He also insisted on all who were fond of *aguardiente* (rum) to drink until they could not move, on pain of being regarded as wanting in consideration to him.

“Cape Gracias á Dios unfortunately has no commerce, but it

has a favorable and picturesque situation. It has in front a salt lake of large capacity, which is separated from the ocean by a strip of land covered with mangroves, opening from the sea upon the south, where vessels may enter to reach the town or settlement. The coast is here occupied by Moscos and Sambos, among whom are one or two Englishmen. One of these is named Stanislaus Thomas Haly, who has about one hundred head of cattle, with some mares and saddle-horses. The climate at this point is healthy, as is also that of the valley of the river, for in all my journey I saw but one sick person.

“Of the islands on the coast I have no personal knowledge. In returning from the cape I was occupied twenty days. Mr. Haly assured me that a road might be opened by which the journey from the cape to this point might be made in six days. He also stated that, in his opinion, at a cost of ten thousand dollars, the few difficulties in the river, which obstruct the transportation of commodities, could be removed.”

CHAPTER XVIII.

ABORIGINAL INHABITANTS OF NICARAGUA—THE GUATUSO
INDIANS OF THE RIO FRIO.

I HAVE elsewhere indicated the peculiarities and general affinities of the aboriginal inhabitants of Nicaragua.* At present, their descendants, although constituting the mass of the population of the country, have lost most of their distinguishing characteristics, and settled down into that singular semi-civilization which prevails in the Spanish American states, and which it is difficult to consider as any considerable advance on that which existed, in Central America at least, previous to the Conquest. As we have seen, the tribes which occupy the unexplored districts of Chontales have undergone but little change from their original condition.† They do not, however, maintain a rigorous seclusion, nor do they seek to repel, by an implacable hostility, any intercourse with their neighbors. There are, however, a few aboriginal tribes, scattered at intervals over the American continent, who, from their inaccessible position and other circumstances, have succeeded in maintaining an entire isolation from the rest of the world, and who consequently retain, unaffected by contact or intercourse with Europeans, their primitive ideas, languages, and habits of life. A notable instance of this kind is afforded by the Huatusos or Guatusos, inhabiting the basin of the Rio Frio, a

* Nicaragua, its People, Scenery, and Monuments, vol. ii., p. 305-362.

† See note to page 392.

river falling within the territories of the State of Nicaragua. This river takes its rise in the cluster of mountains which constitutes the highlands of Costa Rica, and of which the volcano of Cartago may be regarded as the nucleus. It has a course a little west of north, receiving various affluents, which descend from the Pacific or volcanic range of mountains on one hand, and from the true Cordilleras on the other, and finally flows into the Lake of Nicaragua at its south-eastern extremity, within a few hundred yards of the point where the Rio San Juan, the outlet of that lake, makes its debouchure.

The valley of the Rio Frio, lying parallel with the sea-coasts, midway between the oceans, and protected on every side by mountains, was not easily accessible to the Spanish conquerors; and its inhabitants owe their independence not less to this circumstance than to their own warlike character, which has enabled them to repel the various feeble attempts that have been made to reduce them to the Spanish authority.

In common with some other tribes in Costa Rica, Honduras, and Guatemala, they come under the general denomination of *Indios Bravos*, and very extraordinary notions, both of their physical appearance and prowess, are entertained by the people at large. They are reported to be above the ordinary stature, and to have red hair; but, in fact, nothing is known of their language, nor of their habits and customs, beyond what is derived from the few observations made by the missionaries, in their futile attempts to open communication with them, during the latter half of the last century.

In 1849, my friend, Colonel Trinidad Salazar, then commandant of the military establishment of San Car-

los, at the outlet of Lake Nicaragua, undertook to ascend the Rio Frio, and explore the country of the Guatusos. Two boats, carrying soldiers, accompanied his expedition; but, after ascending the river for several days, advancing slowly against the current, they were suddenly attacked by the Guatusos, who were in ambush on the banks, and compelled to retreat. Colonel Salazar was severely wounded by arrows in the encounter. He found the river, as far as he ascended it, narrow and rapid, but of good depth of water; the banks, for some distance from the lake, low and swampy, but gradually becoming higher, and giving indications of a broad and fertile valley.

This account, so far as it goes, coincides with that which was given by Diego de la Haya, in his *Informe*, directed to the King of Spain, while he was governor of Costa Rica, which was about the year 1719. He wrote that the Rio Frio took its rise in the great longitudinal valley lying between the Atlantic and Pacific ranges of the Cordilleras. "It is surrounded," he adds, "by a belt of volcanoes, which, while they protect it from intruders, furnish, upon their inner declivities, the means of support for the incommunicative people who seek for independence within their fastnesses."

But, whoever were the original occupants of this secluded region, there is reason for believing that they received considerable accessions to their numbers at periods long subsequent to the discovery. Tristan, Bishop of Nicaragua (1775?), informs us that, when the pirates pillaged and destroyed the town of Esparza, in the Department of Nicoya, situated near the Gulf of Nicoya, on the Pacific, toward the close of the seventeenth century, several *pueblos* of the Indians, including those of Aranjuez and Garavito, completely

disappeared, and were never heard of afterward. It was generally supposed that the inhabitants had withdrawn to the country of the Guatusos, and incorporated themselves with that mysterious nation. But opinions differed in regard to the existence of the Guatusos; some affirmed that, in their explorations, they had seen the distant establishments of these Indians, while others asserted that they had sought for them, but without success, and therefore discredited their existence.

A clear proof of the existence of the Guatusos was nevertheless found in the disappearance of horses, mules, and cattle from the frontier *haciendas*. The tracks of these animals were easily traced in the direction of the mountains bordering on the valley of the Rio Frio, but beyond this barrier no one could be induced to follow them. "It was," says the chronicler, "as if these mountains were the gates of hell, from within which there was no escape;" and the people chose rather to submit to robbery than venture in pursuit of the robbers. They nevertheless well understood that these marauders were Guatusos.

The Padre Zepeda, Franciscan of Guatemala, in 1750, attempted an exploration of the country of the Guatusos. He followed the entire chain of the Mountains of Tilaran (a word signifying "country of many waters"), which commences with the volcano of Orosi, and bristles with other volcanoes in the following order, viz., Tortuga, Rincon de la Vieja, Heridenda, Miravallos, Cueurualapa, Thenorio, Pelado, Buenavista, Chomes, and Aguacate, being, in all, ten great volcanoes, without counting the smaller ones. From these mountains flow many rivers into the Rio Frio and Lake Nicaragua, through broad plains, in which the

padre professed to have found more than five hundred houses and gardens of the idolaters, who received him well, and with whom he remained for several months.

In 1756, the guardian of the convent of Esparza communicated the information which had been received from the Padre Zepeda to the government of Costa Rica at Cartago, and obtained instructions to follow up his discoveries. In company with several other persons, he accordingly started, but lost his way, and only got back with difficulty.

In 1761, however, some people of Esparza captured in the mountains four savages, whom the chronicler describes as *Sambos*, or mixed Indians and negroes. These were taken to Esparza, where they confessed that establishments of the kind described by Zepeda existed beyond the mountains to which they belonged. It was found that they had some knowledge of the doctrines of the Church, which they said they had derived from the teachings of a padre called Clementino Adam.

It turned out, on inquiry, that the Padre Adam was son of the proprietor of an estate on the flank of the volcano of Thenorio, who had been designed for the Church, and sent to Leon to qualify himself and receive orders; but, having incurred the displeasure of the bishop, he finally became melancholy, and, abandoning his friends, fled to the country of the Guatusos. Here he lived and died, without being permitted to return. A missionary named Zamacoiz, with the Cura of Esparza, then undertook to visit the Guatusos, under the guidance of the captured Sambos; but the latter only led them into the recesses of the forest, and then abandoned them.

Afterward, in the year 1778, the Fray Tomas Lopez undertook the enterprise, climbing the volcanoes of

Orosi and Tortuga; but, finding no encouragement from that direction, he resolved to go by water, and, proceeding to the island of Ometepe, in Lake Nicaragua, started from thence, in a boat, for the Rio Frio. He entered that river, and proceeded up it until he reached the gardens and plantations of the Indians. The instant the four sailors who accompanied him saw the first raft of the Guatusos, they fled with precipitation. In vain did the Fray Lopez endeavor to prevail upon them to land him alone: they continued their flight; nor could they be persuaded to return.

Three other similar attempts were made in the year 1782. The Fray Lopez and the Padre Alvarado of Cartago entered the wilderness by way of Thenorio; but, after wandering seventy-five days, they found themselves on the shores of Lake Nicaragua, a long distance above the mouth of the Rio Frio. The other attempts for the same end had no better success.

The President Galvez, in the same year, considering it necessary to make a survey of the Rio Frio and the adjacent country, sent a Captain Brizzio for that purpose. He ascended the river until he saw some fishing canoes and large cultivated fields, but he does not seem to have had any communication with the Indians themselves.

The Bishop of Nicaragua (Tristan), hearing Brizzio's report, solicited the governor to lend him the aid of two of the royal boats, with the necessary crews, with which he proposed to continue the explorations of Brizzio. These were furnished, and on the 20th of February, 1783, the bishop and his party entered the Rio Frio. On the fourteenth day they discovered, in a secluded and shaded path on the banks of the river, three Indian fishermen, "of good size, and white," who

at once threw away their nets and provisions, every thing except their bows and arrows, and commenced to retreat. They were followed by the indefatigable Fray Lopez, already distinguished for his efforts to reach the Guatusos, who called after them in the language spoken in the island of Solentenami, assuring them of peace, but without effect.

Thinking that a town could not be far distant, and that a few persons would excite less alarm than a large party, and consequently be better able to open communication with the Indians, the bishop sent forward a small boat, with the Padres Lopez, Mejia, Alvarado, and Corral, who went up the river until they came in the vicinity of a town of the Guatusos. The Padre Lopez then advanced in a single boat, in company with a few companions. They soon descried an Indian descending the river on a raft, on which he had a small fire, a little roof of branches, and some plantains and other provisions. He landed in a grove of cacao-trees, loaded with fruit, which extended far in every direction. The missionary determined to land at the same point, with a servant, and three islanders of Solentanimi as interpreters; but suddenly the Indian whom they had seen showed himself on the bank, and raised a loud shout, whereupon a great number of other Indians appeared on both sides of the stream, and commenced a furious discharge of arrows upon the padre and his companions. One of the interpreters was wounded, and, overcome with fear, with one of his companions, plunged into the river and swam down the stream. The missionary, to escape the arrows, lay down in the bottom of his boat, and made signs of peace; but these were unheeded. The Indians continued their shouts and the discharge of their arrows with

the greatest fury. Desirous of being alone, the padre instructed his companions to leap overboard and escape, which they were not loth to do ; and then, rising with a crucifix in his hands, the padre presented himself to the Indians. Seeing him alone and unarmed, they suspended their attack, and, invited by his signs, entered his boat and escorted him to their village. The companions of the padre observed this proceeding from a distance, but, as they were pursued by the Indians, they continued their flight.

In the mean time, the man who had been wounded, together with his companion, had reached the boats which the Padre Lopez had left behind, reporting that the padre and his companions had been attacked by a multitude of Indians and killed. Hereupon the boats hastened down to inform the bishop of the catastrophe, descending in three hours a distance which it had taken them a day and a half to ascend against the stream. The bishop and his associates, also taking alarm, and fearing pursuit, immediately commenced their return, going down in two hours and a half a distance which had occupied them three days and nights in ascending.

The next morning, the Indians who had last left the Padre Lopez, having taken an abandoned canoe, overtook the bishop. They announced the probable safety of the padre, which somewhat calmed the agitation of the bishop and his party. He nevertheless continued his flight, and on the day following reached the fort of San Carlos, at the mouth of the river. The commandant, Brizzio, immediately made application to the governor of the province for aid to attempt the rescue of the Padre Lopez ; but whether the attempt was ever made, or the padre again heard from, is unknown. From that period until 1849, it is believed, no further

efforts were made to reach the Guatusos, who consequently remain as little known now as they were at the period of the discovery and conquest, three hundred and fifty years ago.

Regarding the question, To what aboriginal family do the Guatusos belong? we have only the indication furnished from the fact that the Indians from the islands of Ometepe and Solentenami were taken with the various expeditions to act as interpreters. Now these Indians were of the same family with those who occupied the other islands in Lake Nicaragua, and also the main land lying between that lake and the Pacific, viz., *Nahuatls*, or people of the true Aztec or Mexican stock. The fact, too, that the people of the town of Esparza, which, if it did not fall within, was certainly near the district formerly occupied by the *Nahuatls* of Nicaragua, were able to hold conversation with the Guatusos who had been captured in the mountains, not less than that the aboriginal inhabitants of that neighborhood were understood to have incorporated themselves with the Guatusos when pressed by the pirates—all go to favor the conclusion that the Guatusos are *Nahuatls*, and of the same stock with those who occupied the western shores of the lake at the period of the conquest of the country by Gil Gonzalez d'Avila, in the year 1522, and who were also established in the State of San Salvador, and in the valley of Anahuac, in Mexico.

CHAPTER XIX.

POLITICAL ORGANIZATION, CONSTITUTION, RELIGION, AND PROPOSED INTER-OCEANIC CANAL.

UPON the dissolution of the Republic of Central America, the government of Nicaragua convened a Constituent Assembly for the purpose of organizing a new Constitution, to conform to its altered relations, which was proclaimed November 12th, 1838. It was accepted in due form by the people, and, although altered in a few particulars, and several times suspended during periods of political convulsions, it still continues to be the fundamental law of the state. It is thoroughly republican in its provisions. It provides that the executive power shall be vested in an officer styled the "Supreme Director," who is elected directly by popular vote for the term of two years, but is ineligible for two consecutive terms. He must be a native of Central America, a resident for five years in the state, and have attained the age of thirty years. The legislative power is vested in an Assembly, composed of a Senate and House of Representatives. The Senate consists of two members from each of the six districts into which the state is divided: they must possess all the qualifications of the Supreme Director, besides actual property to the value of \$1000. They hold their offices for four years, and are so classified that the term of office of one fourth of the number expires annually. They are not eligible beyond two consecutive terms, nor can any ecclesiastic be elected to their body. The

Representatives are apportioned on the basis of every twenty thousand inhabitants. They must have attained twenty-five years of age, have resided one year in the state, and may be either secular or ecclesiastic. They are eligible for only two consecutive terms. No officer in the employ of the government can be elected to either branch of the Assembly; nor can any member accept a public appointment. The acts of this assembly require a vote of two thirds of each branch, and the approval of the Supreme Director, in order to have the force of law. All males of the age of twenty years, born in the country, are electors. Exceptions are made in favor of married males, and persons who have obtained a scientific degree or acquired a liberal profession. These secure the privileges of electors at eighteen years of age. All persons convicted of criminal offenses, who traffic in slaves or are privy to such traffic, or who accept employment, or titles, or pensions from other governments, forfeit their citizenship. This right is also suspended in certain cases, one of which is rather extraordinary. An individual who accepts the position of personal servant to another is incapable, for the time being, of exercising his political privileges.

The rights of the citizen are defined to be "liberty, equality, security of life and property, all of which are inseparable and inalienable, and inherent in the nature of man." Their preservation is declared to be the primary object of all society and government. "Every man is free, and can neither sell himself nor be sold by others." And although the Catholic religion is recognized by the state, and protected by the government, yet all other religions are tolerated, and their free and public exercise guaranteed. Entire liberty of speech and the freedom of the press are also guaranteed, but

individuals are subject to arraignment for their abuse. The right of petition, the principle of the inviolability of domicile, the security of seal, etc., etc., are recognized in their full extent, and are placed beyond the reach of the legislative or administrative powers.

The Judiciary consists of a Supreme Court, the members of which are named by the House of Representatives, and confirmed by the Senate, three in each department, who hold their offices for only four years, but are always eligible for re-election. One in each district is designated as presiding judge, and the president judges, meeting annually in the capital, constitute a Court of Appeals, or final resort.

In short, as observed at the outset, the whole spirit, and all the provisions of this Constitution, are eminently republican. It displays a full knowledge of the duties and requirements of government, and needs only to be faithfully administered to meet all the purposes of a sound political organization. If it does not do this, the causes of its failure lie elsewhere—in the circumstances of the people.

The political circumstances of Nicaragua for a number of years have been such as completely to paralyze its industry and break down its commerce, both of which have been reduced to a minimum. The latest financial statement of the government is for 1851, during which year the revenues from all sources were \$122,686, and the expenditures \$173,646, being a deficit of \$50,964. The duties on imports received *via* the River San Juan were \$50,003; *via* Realejo, \$7575.

From what has been said, it sufficiently appears that Nicaragua is a country of great beauty of scenery and vast natural resources. She has, however, attracted the attention of the world less on these accounts than be-

cause she is believed to possess within her borders the best and most feasible route for a ship-canal between the two great oceans. The project of opening such a canal began to be entertained as soon as it was found that there existed no natural communication between the seas, as early as 1527. Since that period it has furnished a subject for much speculation, but beyond a few partial examinations, until very lately, nothing of a practical or satisfactory character had been attempted. In 1851, a careful survey was made of the River San Juan, Lake Nicaragua, and the isthmus intervening between this lake and the Pacific, by Colonel O. W. Childs, previously Engineer-in-Chief of the State of New York, under the direction of the now extinct "Atlantic and Pacific Ship-Canal Company." Until then, it had always been assumed that the River San Juan, as well as the lake itself, could easily be made navigable for ships, and that the only obstacle to be overcome was the narrow strip of land between the lake and the ocean. Hence all the so-called surveys were limited to an examination of that part of the line. One of them was made under the orders of the Spanish government, by Don Manuel Galisteo, in 1781; another, and that best known, by Mr. John Bailly, under the direction of the government of Central America, in 1838. An intermediate examination, quoted by Thompson,* seems to have been made early in the present century. The following table will show the results of these surveys, as regards this particular section :

* Narrative of an official Visit to Guatemala, by G. A. Thompson. London, 1829, p. 512.

Authorities.	Distance from Lake to Ocean.	Greatest elevation above Ocean.	Greatest elevation above Lake.
Galisteo, 1781	17 miles 200 feet	272 feet	134 feet
Quoted by Thompson, 1829	17 " 320 "	296 "	154 "
Baily, 1838	16 " 730 "	615 "	487 "
Childs, 1851	18 " 3120 "	159 "	47½ "

As the survey of Colonel Childs is the only one which can be accepted as conforming to modern engineering requirements, it will be enough to present the detailed results to which he arrived. The line proposed by him, and on which all his calculations and estimates were based, commences at the little port of Brito, on the Pacific, and passes across the isthmus, between the ocean and lake, to the mouth of a small stream called Rio Lajas, flowing into the latter, thence across Lake Nicaragua to its outlet, and down the valley of the Rio San Juan to the port of the same name on the Atlantic. The length of this line was found to be 194½ miles, as follows:

	Miles.
WESTERN DIVISION—Canal from the port of Brito, on the Pacific, through the valley of a small stream called Rio Grande, falling into the Pacific, into that of the stream called Rio Lajas, to Lake Nicaragua .	18.588
MIDDLE DIVISION—Through Lake Nicaragua, from mouth of Rio Lajas to Fort San Carlos, at the head of San Juan River	56.500
EASTERN DIVISION— <i>First Section</i> —Slack-water navigation on San Juan River from San Carlos to a point on the river opposite the mouth of the Serapiqui River	90.800
<i>Second Section</i> —Canal from opposite mouth of Serapiqui to port of San Juan del Norte	28.505
Total, as above	194.393

ORIGIN OF THE CANAL GRANT.—The charter of this

company under which Colonel Childs carried on his investigations is dated September 22, 1849, and was obtained for a term of eighty-five years from the completion of the proposed canal. The surveys were to be commenced within one year, and the whole to be completed in twelve years. The canal, by the terms of the charter, was to be of dimensions sufficiently great to admit and pass vessels of all sizes with speed and safety. The company was to pay to the state, during the period assigned for the construction of the work, the annual sum of \$10,000; to give to the state \$200,000 of stock in the canal, on the issue of stock; the state to receive, for the first twenty years, twenty per cent. annually out of the net profits of the canal, after deducting the interest on the capital actually invested, at the rate of seven per cent.; and for the remaining sixty-five years twenty-five per cent. of the profits. The company, on the other hand, were to receive fifteen per cent. annually out of the net profits of the canal for the first ten years after it should revert to the state, provided it did not cost over \$20,000,000; but if it should cost more than that sum, the company to receive twenty per cent. for twenty years. During the period of constructing the canal (twelve years), the company had the exclusive right of navigating the waters of the state by steam, and also the privilege of opening a transit route through its territories, upon the principal condition of paying ten per cent. of the net profits to the state. There were some other provisions as to lands, tolls, etc., of no special importance.

Under this charter the company perfected its organization. It divided its original shares into a considerable number, called "canal rights," which were sold,

and their holders brought into the organization. The first installment was paid, and in August, 1850, just in time to meet the stipulation providing that the surveys should be commenced within one year from the date of the contract, a party of surveyors was sent out to Nicaragua. They were under the direction (as already said) of Colonel O. W. Childs as chief engineer. He arrived in Nicaragua on the 27th of August, 1850, and, so far as his report is concerned, we are left to infer that he at once commenced the surveys for the canal. His report is dated March 9, 1852.

THE LINE OF SURVEY.—In the various projects for uniting the two seas, the line of the River San Juan has always been contemplated as that by which the great lake of Nicaragua is to be reached. From that lake to the Pacific various routes have been suggested :

1. From Lake Nicaragua *via* the River Sapoa to the Bay of Bolaños, in the Gulf of Salinas, on the Pacific.

2. *Via* the Rio Lajas to the port of San Juan del Sur, or some point not far from it, on the Pacific.

3. *Via* the Rio Tipitapa into the superior lake of Managua, and from this lake to the Pacific at the little port of Tamarinda, the port of Realejo, or into the magnificent Gulf or Bay of Fonseca.

By his instructions, Colonel Childs was limited to a survey of the direct routes from Lake Nicaragua to the Pacific, provided either of them should prove practicable. As a consequence, finding a route which, in his opinion, was practicable, he made no surveys from the superior lake of Managua to the Pacific. He, however, made some observations on the line of the connection between the two lakes by the River Tipitapa—if a channel dry for most, if not all of the year,

can be called a river. This is a source of great regret, especially in view of the deficiency, on the surveyed routes, of a good harbor on the Pacific, while both Realejo and the Gulf of Fonseca are all that can be desired as ports.

Lake Nicaragua is estimated by Colonel Childs to be one hundred and ten miles in extreme length by thirty-five in (average) width. Its nearest approach to the Atlantic is at its southern extremity, from which, on a right line, it is about eighty miles distant. The point of its nearest approach to the Pacific is near the middle of its length, where, by the shortest line, the distance is about eleven miles.

The San Juan River was found by Colonel Childs to be, following its sinuosities, 119 miles in length. It has a great number of tributaries, generally small, with the exception of the San Carlos and Serapiqui, which come in from the mountains of Costa Rica on the south. The first of these enters the San Juan at sixty-five miles, and the second ninety miles below the lake. These streams flow through valleys transversely to that of the San Juan, which is further intersected by ranges of hills, coming in both from the north and the south, at the Rapides del Toro, Castillo, Machuca, etc.

The Lake of Nicaragua lies longitudinally, nearly parallel to the Pacific Ocean, and is separated from it, for nearly two thirds of the length of the lake, by hills of comparatively moderate acclivity and elevation, in most cases capable of cultivation to their summits. Within this distance, also, are several transverse valleys, extending nearly (Colonel Childs says quite) across, with summits varying in height, and furnishing generally good opportunities for direct communications by ordinary roads or by canal.

ROUTE *via* RIVER SAPOA.—This line lies chiefly in the Department of Guanacaste, now in dispute between Nicaragua and Costa Rica, and actually occupied by the latter.

The examination of this line by Colonel Childs only proved its impracticability for the purpose of a canal. He found that to pass the summit a cut 119 feet in depth would be required, and an up-lockage from the lake of $350\frac{1}{2}$ feet, and a down-lockage to the Pacific of 432 feet. Water to supply the upper locks, it was ascertained, could only be obtained with difficulty, and at great cost. Besides, a long rock cut of three fourths of a mile would be required from low-tide mark in the Bay of Salinas to deep water. In short, the physical difficulties on this line, if not of a nature to make the construction of a canal impossible, were nevertheless such as to make it impracticable.

ROUTE FROM MOUTH OF THE RIO LAJAS TO BRITO.—The line from Lake Nicaragua to the Pacific, to which public attention has been most directed, is one starting from the mouth of the Rio Lajas, a few miles below the town of Rivas, or Nicaragua, to the port of San Juan del Sur, or Concordia, on the Pacific. As already stated, not less than three surveys had been made over this line; one in 1781 by Galisteo, a Spanish engineer, and the last by Mr. Baily, an Englishman, under the Republic of Central America, published in Stephens's "Incidents of Travel in Central America." The line pursued by both Galisteo and Baily was governed by the circumstance of a measurably good port on the Pacific—that of San Juan del Sur, the best on the whole line of coast from the Bay of Salinas northward to Realejo. Baily's line is sixteen miles and 730 feet in length, and the greatest elevation

above the lake 487 feet. That of Galisteo is seventeen miles 200 feet in length, and the greatest elevation above the sea 272, and above the lake 134 feet. Bailly's line, for half of its distance, involved 209 feet of average vertical cutting; that of Galisteo, for half of its length, an average vertical cutting of 108 feet. These facts, and others, among which the absolute impossibility of supplying the summit levels with water, and the necessity of tunnels, combined to make the construction of a canal on this line wholly impossible.

Colonel Childs seems to have been satisfied of the impracticability of this line, after a very rapid examination, and to have devoted himself to the discovery of one more feasible. In doing this, however, it was found necessary to abandon San Juan del Sur as the western terminus.

Starting at the point on the lake to the eastward of Rivas, leveling westward, through a transverse, moderately undulating plain, he ascended, on a distance of six and a half miles, 326 feet, to the summit of a broad valley, passing between the hills (which are here of moderate height), and connecting with another valley on the west side, which extends to a place on the Pacific called Brito, where a stream, named Rio Grande, flows into the sea. The quantity of water available for this summit being entirely inadequate, and the cut altogether too formidable, on the plan of carrying through the lake level, this route was abandoned. Another line, not far from this, was attempted, with very nearly the same result.

Colonel Childs next started from the mouth of the Rio Lajas, the same point with his predecessors, and carried a line of levels to the summit of a transverse valley lying about six and a half miles south of Rivas,

and reaching between the valley of Rio Lajas and that of the Rio Grande, already mentioned as flowing into the Pacific at Brito. This summit was found to be only forty-seven and a half feet above the surface of the lake, as it stood on the 23d day of December, 1850, at which time it was three and a half feet above its lowest stages, and one and a half feet below the level at which it ordinarily stands at the height of the rainy season. The length of this line from lake to sea is about twenty miles. This is the route, and the only direct one, between the lake and sea, regarded by Colonel Childs as feasible, and upon this all his calculations respecting the proposed canal are based. In his own language, "the conclusion was arrived at that the line leading from the lake, at the mouth of the River Lajas to the Pacific at Brito, presented more favorable conditions for the construction of the canal than any other; it was therefore determined to survey and carefully to locate a line across upon this route."

This line, then, runs through the valley of the River Lajas, the waters of a principal branch of which interlock with those of the Rio Grande, and, through the valley of the latter, reaches the sea. The stream first named has its origin about ten miles southwesterly from its entrance into the lake, on the eastern slope of the dividing ridge, and, after running northwesterly two miles, along the base of the hills, takes a northerly direction through comparatively level savannas, a distance of six or eight miles, when it bends to the east, and in a mile and three fourths enters the lake. The Rio Grande rises on the eastern slope of the same range of hills, and two or three miles northwest from the sources of the Lajas, and, after flowing some three or four miles at the foot of their slope, bends to the

west, and by a narrow and somewhat irregular valley passes through the ridge, and thence, in a more capacious and uniform valley, into the Pacific.

WESTERN SECTION OF PROPOSED CANAL BETWEEN LAKE NICARAGUA AND THE PACIFIC.—The entire line of the canal proposed by Colonel Childs, and upon which all his calculations and estimates are based, is therefore through the valley of the River San Juan into Lake Nicaragua, across Lake Nicaragua to the mouth of the Rio Lajas, through the valley of that stream, and across the summit of forty-seven and a half feet which separates it from that of the Rio Grande, and down the valley of the Rio Grande to Brito, where that stream enters the Pacific.

Now, in order to understand Colonel Childs's conclusions, and appreciate the data which he gives, we must know what kind of a work he proposes. He contemplates a canal but seventeen feet deep; and as he intends to supply the western section, from the lake to the sea, by water from the lake, it would be necessary to commence construction in the lake, at a point where the water is seventeen feet deep at mean stage. This point is opposite the mouth of the Lajas, and twenty-five chains from the line of the shore. From this point, for a mile and a half, partially along the River Lajas, the excavation will be principally earth; but beyond this, for a distance of five and a half miles, which carries the line beyond the summit, three fourths of the excavation will be in a trap rock. That is to say, the deepest excavation, or open cut, will be sixty-five feet, and involve the removal of 1,879,000 cubic yards of earth, and 3,378,000 cubic yards of rock. The excavation and construction in this five and a half miles alone are estimated at upward of \$6,000,000.

The summit passed, and the valley of the Rio Grande reached, the excavation, as a general rule, will be only the depth of the canal. Colonel Childs found that the lake, at ordinary high water, is only 102 feet 10 inches above the Pacific at high, and 111 feet 5 inches above it at low tide, instead of 128 feet, as calculated by Mr. Baily. This descent he proposes to accomplish by fourteen locks, of eight feet lift each, placed at proper points in the valley of the Rio Grande, thus bringing us to Brito, the terminus on the Pacific.

The harbor of Brito, as it is called, or the point where the Rio Grande enters the sea, is at best only a bad anchorage. There is here a small angular indentation of the land, partially protected by a low ledge of rock, but nothing adequate for the terminus of an important work like the proposed canal, or capable of answering the commonest requisites of a port. To remedy this deficiency, Colonel Childs proposed to construct an artificial harbor, of thirty-four acres area, by means of moles and jetties in the sea, and by extensive excavations in the land. If, as he supposes, the excavations here would be in sand, it is obviously almost impossible to get proper foundations for the immense sea walls and piers that would be necessary for a work of this kind. On the contrary, if these excavations should be chiefly in a rock, as seems most likely, the cost and labor would almost surpass computation. Assuming the excavations for the purpose to be in earth and sand, Colonel Childs estimates the cost of making a harbor at a little over \$2,600,000.

MIDDLE SECTION OF PROPOSED CANAL.—LAKE NICARAGUA.—Proceeding from seventeen feet depth of water in the lake, opposite to the River Lajas, in the direction of the outlet of the lake at Fort San Carlos,

there is ample water for vessels of all sizes for a distance of about fifty-one miles, to a point half a mile south of the Boacos Islands. Here the depth of water diminishes rapidly to fourteen feet. For the remaining five and a half miles to the fort the water is variable, averaging only about nine feet at low, and about fourteen feet at high water. For this distance of five and a half miles, therefore, an average under-water excavation of eight feet would be required to make the channel, at low water, of the depth of the canal, or seventeen feet. But if the lake were kept at high level, the under-water excavation would be but an average of three feet.

Colonel Childs proposed to protect this portion of the channel by rows of piles driven on each side, along its whole extent, and thinks, after the excavation were made, a sufficient current would be established to keep the channel clear.

EASTERN SECTION—THE RIVER SAN JUAN. — We come now to the section between Lake Nicaragua and the Atlantic, through or along the River San Juan. Excepting a small settlement at the Castillo Viejo, at the Castillo Rapids, thirty-seven miles from the lake, the valley of the San Juan is wholly uninhabited. This section, hitherto supposed the easiest, is nevertheless, by far the most difficult part of the proposed enterprise.

Colonel Childs carried a line of levels from the lake at San Carlos to the port of San Juan, on the northern bank of the stream. The whole distance from San Carlos to seventeen feet depth of water in the harbor of San Juan is $119\frac{3}{4}$ miles; and the whole fall, from the surface of high lake to the surface of highest tide in the harbor, is $107\frac{1}{2}$ feet—to lowest tide, $108\frac{3}{4}$ feet.

Of the above distance, the first ninety-one miles, or from San Carlos to half a mile below the Serapiqui River, Colonel Childs proposed to make the river navigable by excavating its bed, and by constructing dams, to be passed by means of locks and short canals; the remaining twenty-eight miles of the canal to be constructed inland, or independently of the river. Of the whole fall, sixty-two and a half feet occurs on that portion which it is proposed to improve by dams, and on which there were to be eight locks, and the remaining forty-six and a quarter feet occurs on the inland portion of the canal, on which were to be six locks—fourteen locks in all.

Colonel Childs proposed to place the first dam at the head of the Castillo Rapids, a distance of upward of thirty-seven miles from the lake, and to pass the rapids by means of a lateral canal. By means of this dam he proposed to raise the water, at that point, twenty-one and a half feet, and the entire level of Lake Nicaragua five feet above its lowest stages, or, in other words, to keep it at high-water mark. The fall at this dam would be sixteen feet. He proposed also six other dams, four of eight feet fall, one of fourteen and a half feet, and one of thirteen and a half feet. Between all of these there would be more or less excavation in the bed of the stream, sometimes in earth, and often in rock.

Colonel Childs proposed further to improve the harbor of San Juan by moles, etc., and to construct an artificial harbor in connection with it of the capacity of thirteen acres.

In respect of the amount of water in the San Juan, we have some interesting statistics. This amount, of course, varies greatly with the different seasons. The

quantity of water that passed from the lake at its lowest stage, on the fourth of June, 1851, was 11,930 cubic feet per second. The greatest rise of the lake is about five feet. When it stood at 3.43 feet above its lowest level, the flow of water was 18,059 cubic feet per second, being an increase of about fifty per cent. Supposing the same ratio of increase, at high lake the amount of water in the river would be doubled.

The river receives large accessions from its tributaries. Below these, and above the point of divergence of the Colorado, flowing direct into the sea from the San Juan, which falls into the harbor of the same name, the flow of water was 54,380 cubic feet per second, of which 42,056 passed through the Colorado branch into the ocean, and 12,324 through the San Juan into the port.

DIMENSIONS OF THE PROPOSED CANAL.—Where the excavation is in earth, Colonel Childs proposed (and all his estimates are founded on these dimensions) that the canal shall have a depth of 17 feet; that it shall be 50 feet wide at the bottom, 86 feet wide at 9 feet above the bottom, and 118 feet wide at the surface of the water. Where the excavation is in rock, the canal is to be 50 feet wide at bottom, 77 feet at 9 feet above bottom, and $78\frac{1}{2}$ feet at the surface of the water.

LENGTH OF PROPOSED CANAL.—The total length of the line proposed by Colonel Childs, from San Juan del Norte on the Atlantic, to Brito on the Pacific, is $194\frac{1}{2}$ miles, as follows:

	Miles.
Canal from port of San Juan to its point of intersection with the river, near the mouth of the Serapiquí	28.505
Slack-water navigation on the San Juan River, from the above point to San Carlos, at the outlet of the lake	90.800

	Miles.
From San Carlos, across Lake Nicaragua, to the mouth of the Rio Lajas	56.500
From mouth of Rio Lajas to Brito	18.588
Total, as above	194.393

ESTIMATED COST.—The cost of the work is estimated by Colonel Childs in detail. The recapitulation, by divisions, is as follows:

Eastern Division (<i>i. e.</i> , from port of San Juan to lake)	\$12,502,346
Middle Division (through lake)	1,025,676
Western Division (from lake to Pacific)	13,896,603
	\$27,424,625
Add, for contingencies, 15 per cent.	4,113,693
Total estimated cost of canal	\$31,538,318

The canal company published a pamphlet, in which the estimates for the canal were made at New York prices, and in which the total was put down at \$13,243,099. "The prices adopted in the estimate of \$31,500,000," says Colonel Childs, "are made up with reference to the completion of the work within six years from the time of breaking ground, and a commencement of the settlement of the country in the vicinity of the line previous to letting the contracts."

CAPACITY OF THE PROPOSED CANAL.—The charter of the canal company provided that the capacity of the work should be sufficiently great "to admit vessels of all sizes." And it is obvious that a work which will not pass freely the largest vessels can but imperfectly answer the purposes of its construction, or meet the requirements of commerce. But Colonel Childs proposed only one 17 feet deep, 50 feet wide at bottom, and 118 feet wide at top—a capacity wholly inadequate to pass the larger classes of vessels, and one which fails

to meet the stipulations of the charter. The larger merchant-ships, such as are generally employed in the Eastern trade, have a draught of from 20 to 25 feet, and would require, to say nothing of war-vessels and large steamers, a canal of from 25 to 30 feet in depth, which would involve more than double the amount of excavation proposed, and probably treble the amount of cost, and carry it up from \$31,500,000 to \$100,000,000. Here is the fatal deficiency in the whole proposition of Colonel Childs.

To make the canal capable of passing vessels drawing 20 feet of water, Colonel Childs says, would increase to a very great degree the amount of the excavation on the river section, and still more the expense. "Any considerable increase in the depth proposed (17 feet) would require under-water excavations between the lake and the Toro Rapids, a distance of 27 miles, to be almost continuous; it would very much lengthen the cuts on the other portions of the river, and the liability of these artificial channels to receive deposits of earth to such an extent as to obstruct navigation would be very much greater. On the inland portion of the canal," continues Colonel Childs, "a depth of 22 feet of water would, with fifty feet bottom-width, give a transverse water section about 45 per cent. greater than a depth 17 feet, with the same bottom-width; and the expense of the inland portions would also, by reason of the greater depth of excavation, be increased in a still higher ratio."

Colonel Childs seems sensible of the inadequacy of a canal of the proposed dimensions, but thinks that by changes in model, etc., ships of great size could be built to pass a 17-foot canal. That is to say, the world may build ships for the canal, instead of the canal company

a canal for the ships of the world! He states that most steamers draw less than 17 feet, and quotes from Murray's "Treatise on Marine Engines" to show that of 261 steam-vessels, principally English, 15 draw over 17 feet, 21 have 17 feet draught, and 225 less than 17 feet. But he neglects to tell us that experience and economy point to the construction of larger steamers than those now in use, and that such as would be used in the Eastern trade, in the event of the construction of the canal, would be still larger than those of the Collins line, which draw over 22 feet. Besides, a canal of 17 feet is only adequate to the passage of vessels of 15 feet draught. No canal ought to be contemplated with a less depth than 25 feet, and with proportionate top and bottom width.

The Chesapeake and Delaware Canal has a depth of 10 feet.

The Welland Canal is 28 miles long, 9 feet deep, 35 feet wide at bottom, and 71 feet at top. It passes vessels of 350 tons.

The Caledonian Canal, between the eastern and western shores of Great Britain, is 59 miles in length, of which $21\frac{1}{2}$ miles is inland and $37\frac{1}{2}$ through lakes. It is 50 feet wide at bottom, 110 feet at top, and is 20 feet deep. It is capable of passing frigates of 32 guns, and merchant vessels of 1000 tons.

The canal from Amsterdam to New Dieppe, in Holland, is 50 miles long, 36 feet wide at bottom and 124 at top, and is 20 feet 9 inches deep.

In respect of navigating the canal, according to Colonel Childs's suggestions, steamers will propel themselves, and sail-vessels will be moved by tugs constructed for the purpose, except on the portion west of the lake, and between the river and port of San Juan,

where the delay of the driving steamers in passing the locks would make the use of animal power advisable. Calculating 24 minutes as the time required for a vessel to pass each lock, 60 vessels, it is calculated, could be passed in a day. The average rate of speed with which steamers might safely move in the inland portions of the canal is calculated at $2\frac{1}{2}$ miles per hour, on the river portions, 7 miles an hour; and on the lake, 11 miles an hour. Sailing vessels propelled by horse-power might move on the canal at the rate of 2 miles an hour, and on the river and lake with an average speed of 4 miles per hour. For steamers, therefore, the passage from sea to sea is estimated at $46\frac{1}{2}$ hours, or about 2 days; for sailing vessels, 77 hours, or $3\frac{1}{4}$ days.

FACILITIES FOR CONSTRUCTING THE CANAL.—There are many considerations connected with an enterprise of this kind besides its feasibility in a mere engineering point of view, such as labor, materials, etc., etc. To all of these Colonel Childs seems to have devoted some attention.

Timber.—As compared with those of the United States, the original forests of Nicaragua are inferior in size, and the kind and quantity of timber proper for use less in proportion. The tree called the “cedro,” or cedar, is produced in considerable abundance, and can be usefully applied. It grows to a great height, and will produce timber 36 to 40 feet long, and 12 to 18 inches square. The “roble,” a species of oak, is also a tall tree, and furnishes timber equal to the cedar in size. The “nispero,” “laurel,” “madeira negra,” and others, answer a very good purpose. The “nispero” is 29 per cent. stronger than white oak, and may be procured in sufficient quantities, in the opinion of Colonel Childs,

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to be relied on as a substitute for all the purposes in which oak is required. He thinks that, in the aggregate, the forests of Nicaragua, in the sections traversed by the canal, will probably produce all the lumber required.

Stone.—Along the River San Juan the rock is chiefly trap, graywacke, and shale; in many localities too friable for use, but in others, Colonel Childs thinks, it may be found fit for the purposes required. On the west side of the lake limestone quarries were found, capable of producing good lime in abundance. The stone, generally, between the lake and Pacific on the proposed canal line is not good, but it was thought that in case of need it might be obtained from Granada, sixty miles to the northwest, and from a lower point on the isthmus. Very good and abundant clays were found, and a stone from which water-lime of a fair quality may be obtained.

Labor.—Colonel Childs concedes that the prosecution of the works of the canal would be attended with vast difficulties, resulting from a lack of all the essential requisites in the shape of mills, roads, carriages, etc., etc. He thinks the oxen of the country may be obtained in sufficient numbers to do all the necessary hauling of materials. But there is yet a consideration of vastly more importance, viz., labor. Colonel Childs apprehends that it would be necessary to rely chiefly on foreigners. He says that, although the laboring population of the country, when under compulsory circumstances, are capable of great activity and of enduring much fatigue, in their ordinary avocations they are tardy and irregular in their labor. An exception is, however, made in favor of a class of boatmen employed on the river, some 400 in number, in whom we have an

example of physical labor and exposure to the elements scarcely equaled in any country, endured by them with no perceptible prejudice, but apparently with advantage to their health. These men sleep on a narrow plank across their boats, with no other protection than a single blanket; yet there is probably in the world no class of men of more athletic forms, and, notwithstanding their indifferent attention to the conditions of health, more capable of hard service. So far as can be gathered from Colonel Childs's observations, it seems that he would rely chiefly on foreign labor for the construction of the proposed work.

He seems to think it is not unlikely that foreigners, already accustomed to hard labor, may, when thoroughly acclimated, and under no unnecessary exposure, be capable of a fair amount of labor in this country, although not as great an amount as in higher latitudes. He states that of the party engaged in the survey west of the lake, nine were unaccustomed to the climate. After a few months, a slight fever, followed by ague, prevented some of the number from continued daily exercise; but, being in all cases under the control of medicine, it was of short duration. During seven months in this part of the state, illness in the party at no time interrupted a daily prosecution of the survey. Upon the San Juan River the surveying party consisted of twelve persons, exclusive of native citizens. The survey occupied six and a half months, from March to September. "The party generally enjoyed good health, and no individual was prevented by indisposition, beyond a day or two, from full service. Of those engaged as axemen in clearing the line, two were northern men, whose daily exercise exceeded that usual to men in canal-work, without detriment to health or constitution."

Soil.—From San Juan harbor to where the proposed canal would strike the river, the soil is vegetable mould, coarse sand, and sandy loam. Along the river it is of a more mixed character, clay and loam predominating in the valleys, and a gravelly clay, with detached stones, on the hills. West of the lake the central portion of the summit is principally clay; the remainder, together with the soil through the valley to Brito, has a very nearly uniform and equal intermixture of clay, sand, and gravel. The surface soil is generally fine, and contains enough of vegetable mould to render it capable of great production.

Food.—Among the staple articles of food that would, during the construction of the canal, be most required for consumption, may be named maize, plantains, and beans. Of the former and latter two crops are annually raised on the same ground, and the supply of plantains is constant. Besides these are bananas, oranges, lemons, pine-apples, cocoanuts, squashes, melons, tomatoes, and other garden vegetables. Colonel Childs, while considering these sources of supply in food, is nevertheless of opinion that salt meat and flour would have to be brought in large quantities from abroad. Fresh beef, pork, and poultry are abundant in the country.

OPINION OF COLONEL ABERT AND LIEUTENANT COLONEL TURNBULL.—Although a different impression has been sought to be produced in the public mind, yet the government of the United States had no direct interest in the proposed canal, nor manifested any other than might naturally attach to any enterprise of supposed general importance. The surveys of Colonel Childs seem, nevertheless, to have been sent to the Secretary of War, with a request for the opinion of

the government engineers. Mr. Conrad politely referred it to Colonel Abert and Lieutenant Colonel Turnbull, of the Bureau of Topographical Engineers, who give their opinion in a brief letter, dated March 20, 1852. Proceeding upon Colonel Childs's data, they think his plan practicable, that his estimates for a canal of seventeen feet are liberal, and that some reductions might possibly be made. They think that a shorter line might be traced between the port of San Juan and the point of intersection with the river, and recommend another survey of that portion.

OPINION OF ENGLISH ENGINEERS. — The American minister in England, at the request of the company, appears to have transmitted Colonel Childs's surveys to the Earl of Malmesbury, with a wish that he would submit it to competent English engineers for their opinion. James Walker, Esq., civil engineer, and Edward Aldrich, captain of the Royal Engineers, were named for this service. They seem not only to have examined Colonel Childs's survey, but to have subjected that gentleman, who was then in England, to a very close personal examination. Taking his plans, measurements, and statements to be correct, their opinion is, on the whole, favorable. They think that his estimates for work are ample, but regard the amount set down for "contingencies" (fifteen per cent.) too small by at least ten per cent., that is to say, that it should have been twenty-five instead of fifteen per cent. Of all the works of the proposed navigation, they regard the Brito, or Pacific harbor, as least satisfactory. To use their own language, "Presuming Colonel Childs's statements and conclusions to be correct, the Brito harbor is, in shape and size, unworthy of this great ship navigation, even supposing the Pacific, to which

it is quite open, to be a much quieter ocean than any we have seen or have any information of."

They also object to the proposed size, and suggest a canal twenty feet deep instead of seventeen, sixty feet wide at the bottom instead of fifty, and the locks 300 feet instead of 250, as being one "more efficient for the general purposes of trade, by steam or sailing vessels." This would, of course, be attended with great additional cost; but, as they truly observe, "if the junction of the Pacific with the Atlantic be worth doing at all, it is worth doing well." They conclude that, judging from the data, without presuming to vouch for their accuracy, the work is practicable, "and would not be attended with engineering difficulties beyond what might naturally be expected in a work of this magnitude;" that the surveys have every appearance of accuracy, and they are satisfied of the perfect fairness and candor of Colonel Childs; that the works are generally sufficient for the purpose they are intended to answer; and "that the estimates, upon the present value of money, are adequate, in a general way, so far as judgments can be formed from the documents produced and the explanations of Colonel Childs."

OPINION OF BRITISH CAPITALISTS.—We come now to a point not indicated in the report of Colonel Childs, viz., the refusal of the leading capitalists of England to engage in the projected work.

It is well known that at least two expeditions or missions to England were undertaken by agents of the canal company. At their first visit, in 1851, they were unable to present any specific data upon which to solicit the aid of capitalists; they, however, made out a hypothetical case, which they submitted, and received for answer, "Substantiate your statements by facts,

and no difficulty will be experienced in securing the financial aid which you desire; until then, we can return you no definite answer." This reply was not made public in terms, but the agents, on their return, proclaimed that the "great European capitalists had engaged to furnish half the capital for the enterprise." A few, and, it is believed, only a few persons, considering the precise source whence this vaunt came, attached the slightest importance to it.

The second expedition was made in 1852, and this time the agents took out with them both Colonel Childs and his surveys. The opinion of certain British engineers (as we have seen) was procured, and the whole matter resubmitted to the great capitalists, who now, for the first time, thought it sufficiently advanced to merit their serious attention. The result of their examination was communicated to the company in a letter from Mr. Bates, head of the house of Baring Brothers, in August, 1852, and consisted in a declension to embark in the enterprise, for a variety of reasons, chiefly, of course, financial:

1. The dimensions of the canal were not such as, in their opinion, to meet the requirements of commerce, and the work could not be used except by medium-sized steamers and small vessels.

2. That the proposed dimensions were not in conformity with those required by the charter of the company, and that it could not be built of the proposed dimensions without securing a modification of the charter, which, in the existing state of feeling in Nicaragua, it was not likely could be effected.

3. That, supposing the work not to exceed the estimated cost of \$31,000,000, the returns, to meet the simple interest of the investment at six per cent., must

be at least \$1,860,000 over and above its current expenses; or, to meet this interest, and the percentage to be paid to Nicaragua, it must reach, over and above its expenses, \$2,269,200. Estimating the expenses of repairs, superintendence, cost of transportation, etc., at \$400,000 a year (a sum regarded as too small), then the gross returns to make the work pay must be \$2,670,000.

4. But it is found, by inquiry and calculation, that little, if any, of the European trade with the Orient would pass through the canal, inasmuch as the passage by the way of Cape Good Hope is, on an average, 1500 miles nearer than by way of the proposed work.

5. That, even if the distance were in favor of the proposed canal, its small size would prevent nearly, if not quite, two thirds of the vessels engaged in the Indian trade from passing it; and this objection would equally lie against most of the vessels employed in the trade with Western America, the only trade in which the canal would prove serviceable to Europe.

6. That the heavy toll of \$3 a ton on ships would prevent such vessels as could pass the canal from doing so, inasmuch as on a vessel of 1000 tons the toll would be \$3000, or more than the average earnings of such vessels on their voyages.

7. That a canal of the proposed size could only be used by small passenger steamers, the returns from which would not be adequate to pay the current expenses of the enterprise.

While unhesitatingly conceding the immense local advantages of a canal to the United States, these capitalists confessed themselves utterly unable to discover how it could prove of compensating value to the men

who should invest their money in the enterprise. They therefore, for these and other reasons, declined to meet the views of the projectors and their agents.

GUARANTEE OF THE UNITED STATES, ETC.—By the convention of 1850 between the United States and Great Britain, a qualified guarantee was extended to this enterprise, in common with several others. There was also a clause inserted with direct reference to this company, which provided that it should “have a priority of claim over every other company to the protection of the United States and Great Britain,” on condition that it should, within “one year from the date of the ratification” of the convention, “conclude its arrangements and present evidence of sufficient capital subscribed to accomplish the undertaking.” The treaty was ratified, and the ratifications exchanged July 5th, 1850. No subscription of stock having taken place, and no evidence of capital having been presented in the time specified, or indeed at any other time, the company forfeited this special protection in July, 1851; and as the twelve years within which the work was to be constructed will expire in 1861, it may be assumed that its prosecution will depend upon new conditions and combinations. Indeed, it may be questioned if the opening of railways between the oceans may not indefinitely postpone the project of a canal; for, however desirable such a work may be, its realization will depend upon precisely those practical considerations which apply to the simplest works of public utility. It will not do to foot up the commerce between Europe and Asia, and assume, as has generally been the case, that the totals will pass through the canal, if constructed. Now the simple truth is that, so far as Europe is concerned, that part of her trade which

goes to ports on the Pacific coast of America, to the Sandwich Islands, Japan, the northern ports of China, to New Zealand and Australia, is all that will be materially benefited by the construction of a canal. As regards Australia, the principal advantage would be in having a safer, easier, and, consequently, quicker and surer means of communication than is afforded by the Cape of Good Hope; for the Pacific Ocean is pre-eminently the sea of steamers, and where steam navigation, in respect of speed at least, is destined to achieve its most brilliant success. So far as the United States is concerned, the advantages of such a work would naturally be greater than to Europe.

Assuming a canal to be built across the Isthmus of Nicaragua, the following table will illustrate the relations of Liverpool and New York with the principal ports of the East, in respect of distance:

	Via Cape of Good Hope.	Via proposed Canal.	Net Loss.	Net Gain.
From Liverpool				
To Canton	12,900	13,800	900	
Calcutta	11,440	15,480	4040	
Singapore	11,880	15,120	4240	
Sidney	14,980	12,550		2320
From New York				
To Canton	14,100	11,820		3280
Calcutta	12,360	13,680	1320	
Singapore	12,700	11,420		280
Sidney	15,720	9,480		5240

[The distances to Sidney are calculated *via* Torres Straits.]

The following table will illustrate the relations of Liverpool and New York in respect to the principal western ports of America:

	Via Cape Horn.	Via proposed Canal.	Gain.
From Liverpool			
To Valparaiso . . .	8,700	7500	1200
Callao	10,020	6800	3220
Sandwich Isl'ds	13,500	8640	4860
From New York			
To Valparaiso . . .	8,580	4860	3720
Callao	9,900	3540	5360
Sandwich Isl'ds	13,200	6300	6900

But it is not to be assumed that all the trade, much less all the travel, treasure, and mails to the points which I have indicated, will, under any circumstances, pass through a canal. The passengers between New York and San Francisco, amounting annually to nearly 100,000, would never consent to make a voyage of from 1000 to 2000 miles out of their way, to Nicaragua, Panama, Darien, or Atrato, for the sake of passing through a canal, however grand, when by a simple transshipment at Honduras, for instance, and a transit of 200 miles railway, they would be able to avoid this long *detour*, and effect a saving of from 5 to 8 days of time; for, even if steamers were to run to any canal which might be opened, and supposing no detention on account of locks or other causes (calculated by Colonel Childs at 2 days), even then it would be necessary for them to stop, for coals and other supplies, more than quadruple the time that would be occupied by the passengers over the railway in effecting their re-embarkation. And what is true of passengers is equally true of treasure, the mails, and light freight of small bulk and large value.

I do not wish to be understood as arguing against a canal; what I mean to illustrate is this, that, open a canal wherever we may, it will always stand in the same relation to a railway as does the baggage-train

to the express. A canal would be chiefly, if not wholly used by ships and vessels carrying heavy and bulky freights; but, as most articles of this kind are kept in stock in all the principal ports of the world, it is not of so much consequence to have rapidity as constancy of supply, and hence, unless the canal shall be constructed so economically as to admit of a moderate tonnage rate, it is not improbable that ships of this kind would find it more economical to follow the routes now open.

C O S T A R I C A .

CHAPTER XX.

BOUNDARIES — EXTENT — POPULATION — VOLCANOES — CLIMATE — RIVERS — PRODUCTIONS — COFFEE — MINERALS — PORTS.

COSTA RICA is the most southern of the states of Central America, the smallest in respect of population, and, next to San Salvador, the least in territorial extent. It lies between the Caribbean Sea on the east and the Pacific Ocean on the west. Its boundaries on the south, long in dispute with the Republic of New Granada, have been settled by treaty, bearing date June 11, 1856, as follows: Commencing at Punta Burica, on the Pacific, in longitude $83^{\circ} 13'$ west of Greenwich, thence in a right line to the head of a stream called Agua Clara, thence due northeast to the Mountains of Cruces, and along their crest to the source of the Rio Doráces (or Dorado), and down the principal channel of that stream to the Atlantic, at a point some distance above Boca del Toro, or Chiriqui Lagoon. Previous to the negotiation of this treaty, Costa Rica claimed that her southern boundary was a right line drawn from Punta Burica to a point on the Atlantic south of Chiriqui Lagoon, and opposite the island called Escuda de Veragua.* The boundary

* The boundary, as finally defined by treaty, coincides precisely with that laid down in an original MS. map in the possession of the author, by Don Juan Lopez, Geographer Royal, dated Madrid, 1770.

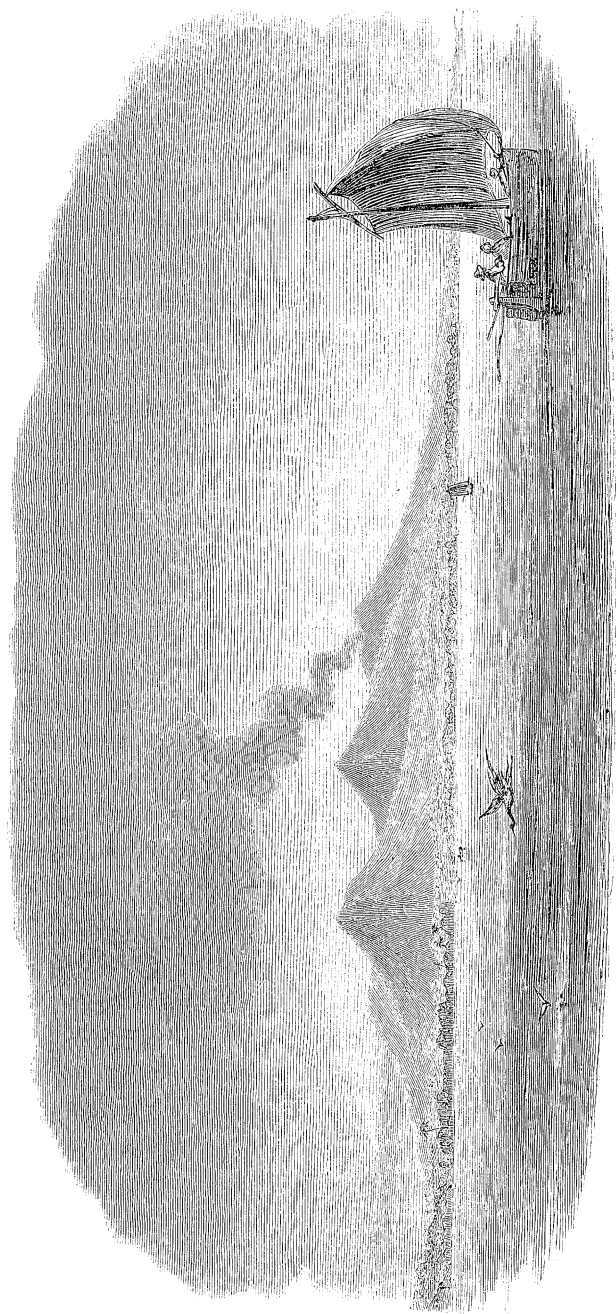
of Costa Rica on the north is in dispute with Nicaragua. The Costa Rican claim, which is utterly without foundation in fact, is the south bank of the Rio San Juan from the port of the same name to Lake Nicaragua, in a right line through the lake to the Rio Flores, a few miles to the southward of the town of Rivas or Nicaragua, and thence a little south of west to the Pacific. The true boundary, however, and that claimed by Nicaragua, as set forth by the historian Juarros, and as laid down in a MS. map by Colonel La Cierra, engineer of the crown of Spain, dated 1818, is a line extending from the principal or Colorado mouth of the River San Juan, following the crest of the mountains which throw their waters northward into that river and Lake Nicaragua, to the mouth of the Rio Salto de Nicoya or Alvarado, on the Pacific. Such is the boundary as defined in Chap. ii., Art. 15, of the Constitution of Costa Rica itself, dated January 21, 1825, and as laid down on all maps of Central America prior to the year 1830.* In other words, Costa Rica lies chiefly between $8^{\circ} 30'$ and $10^{\circ} 40'$ N. latitude, and 82° and 85° W. longitude, and has an area of about 23,000 square miles.

The political divisions and the population of the

* The claim of Costa Rica is founded upon an act of the Federal Congress of Central America, dated December 9th, 1826, as follows :

“For the present, and until the boundaries of the several states shall be fixed, in accordance with Art. 7 of the Constitution, the Department of Nicoya [Guanacaste or Liberia] shall be separated from Nicaragua and attached to Costa Rica.”

This decree was framed in order to give Costa Rica a larger and more respectable representation in the Federal Congress ; but as the boundaries of the several states were never fixed in accordance with Art. 7 of the Constitution, and since the people of the department protested against the change, as did also the authorities of Nicaragua, it was justly claimed that this conditional decree could not affect the sovereign rights of the latter state, and that when, on the dissolution of the republic, she resumed her independent position, she was also entitled to resume her original limits. For a full discussion of this question, see *American Whig Review* for November, 1850, article “*The Great Ship Canal Question.*”



VOLCANO OF OROSI—FROM THE PACIFIC.

state, according to a census made in the year 1849, are given on the authority of Don Felipe Molina, in his "*Bosquejo de Costa Rica*," published in 1851, and are as follows :

COSTA RICA.—CAPITAL, SAN JOSÉ.

Departments.	Capitals.	Chief Towns.	Population.
San José . . .	San José . .	Union, Pacaca, Escazu, Aserri	31,749
		Turrialba, Cot, Quircot,	
Cartago . . .	Cartago . .	Tobose, Orosi, Tucurrique, Terraba, Boruca, Paraiso	23,209
Heredia . . .	Heredia	Barba	17,289
Alajuela . . .	Alajuela . . .	Esparza	12,575
Punta Arenas	Punta Arenas	. . . . .	1,240
		Uncivilized Indians . .	5,000
		Total	91,062

The Department of Guanacaste, now called Liberia, of which the principal towns are Guanacaste, Bagaces, Santa Cruz, and Nicoya (stated by Molina to contain 9112 inhabitants), is in dispute with Nicaragua, and is consequently omitted from the above table. Including this department, the total population at the time of the census was 100,174. Taking the ratio of increase, as established by an enumeration of the births and deaths for the year 1850, at 3000 annually, the present population of the state may be calculated approximately at 135,000. This population, however, is not diffused over the state, but confined almost exclusively within the valley of a stream called Rio Grande, which flows down the western slope of the great volcano of Cartago into the Gulf of Nicoya. Fully seven eighths of all the inhabitants are here concentrated in a district not exceeding 50 miles in length by an average of 20 in breadth.* To the north, east,

* "Costa Rica is divided administratively into five provinces : San José, He-

and south are only unexplored mountain fastnesses and dense tropical forests, penetrated in three or four directions by rough and obscure paths, one conducting, by way of the Rio Serapiqui, to the River San Juan; another crossing the chain of the Cordilleras, and descending to the deadly port of Matina, on the Caribbean; while a third extends southward, through an unbroken wilderness, to the frontier Indian towns of Térraba and Boruca.

The great chain of the Cordilleras traverses very nearly the longitudinal centre of the state, in a direction due N.W. and S.E. Its course is marked by a series of high volcanoes, commencing with the active volcano of Orosi (8650 feet in height), which overlooks Lake Nicaragua, and followed in order by La Vieja, Mirivalles (4700 feet), Los Votos (9840 feet), Barba, Cartago or Irazu (11,400 feet), Turrialba (12,500 feet), Chirripo, and the peaks, possibly volcanic, called Blanco (11,740 feet), Rovalo (7021 feet), and Chiriqui (11,265 feet). The general elevation of the chain, or of the principal ranges which compose it, may be estimated at from 5000 to 6000 feet, and all parts of the country rising above these heights are called *tierras frias*. From these elevations the country does not subside, as might be supposed, in gradual slopes to

Heredia, Alajuela, Cartago, and Guanacaste. The province of San José is in every respect the most important. It is the seat of government; its soil produces nearly the whole of the coffee crop; and it is the militia of this province who furnish the garrison of the capital and the frontier post of Serapiqui. The proportion of militia in each province is as follows: San José, 3200; Cartago, 1000; and Guanacaste, 800. Heredia and Alajuela are exempt, because the small farmers of those provinces follow the profession of *arrieros* (carriers). There is much jealousy between the provinces. This jealousy is most acrid between Cartago, which once held the rank of the capital, and San José. Alajuela and San José are no better friends; and as to Guanacaste, it is so far removed from the centre that it seems to be a supernumerary member, and has little to say in home politics."—*Letters from Costa Rica, by a British Consul, 1854.*

the sea, but falls away in a series of terraces, as diversified in temperature and in products as they differ in altitude. Those falling between 5000 and 3000 feet of elevation are called *tierras templados*, while the country below 3000 feet, to the sea-level, comes under the denomination of *tierra caliente*. Here the cacao, vanilla, and banana have their most luxuriant growth, while in the *tierras templadas* the sugar-cane, the orange-tree, and coffee-plant flourish in greatest perfection. Pines and oaks crown the *tierras frias*, and give them the aspect of higher latitudes.

These topographical features sufficiently indicate the variety of temperature to be found in the state. In the district around the capital, and within which the principal part of the population is concentrated, the thermometer generally ranges, during the forenoon, from 65° to 75° of Fahrenheit; from noon until three o'clock of the afternoon, during the hottest season, sometimes as high as 82° of Fahr.; during the night, at the coldest periods, never below 57° of Fahr. Upon both coasts the average mean of temperature is, of course, much higher; but on the Pacific the thermometer seldom rises above 85° of Fahr. As elsewhere observed, the seasons are well defined. On the Pacific the dry season lasts from November to April, the rainy season from April to November. On the Atlantic slope these periods are nearly reversed. Here, too, a much larger amount of rain falls, and the climate is hot and insalubrious. The country is covered with thick forests and jungles, and the coast, destitute of good ports, is abandoned to the sway of savage nature.*

* "The climate of the valleys of the San José and Cartago, and other smaller ones which occupy the table-lands of the Cordillera, is, for a tropical country, quite healthy; and the only serious disease the inhabitants complain of is dyspepsia. I should think, also, that cutaneous diseases would be quickly developed

The configuration of Costa Rica prohibits the existence of any large rivers. The streams which flow down the steep sides of the Cordilleras, to both oceans, are mere torrents, short and rapid. The largest is the Rio Tempisque (Salto de Nicoya), which rises at the foot of the Volcano of Orosi, and flows S.E. into the head of the Gulf of Nicoya, through a valley lying between the coast-range of mountains and the true Cordilleras. The Rio Grande, already mentioned, rising in the high mountain centre marked by the volcanoes of Cartago and Turrialba, flows due west, also into the Gulf of Nicoya. Several considerable streams, rising in the same grand group of mountains, flow nearly due north—the unexplored Rio Frio into Lake Nicaragua, and the rivers San Carlos and Serapiqui into the Rio

there in persons thus predisposed. There are also some cases of leprosy, a tendency to dropsy, and some women affected with *goître*. As for the seaboard, whether on the Atlantic or Pacific, it is a mere question of more or less unhealthiness, the Pacific side being the less fatal of the two, though Punta Arenas, the sea-port of Costa Rica, on the Gulf of Nicoya, which is said by Mr. Molina, in his sketch of the country, to be healthy, is decidedly the reverse, and subject to inroads of yellow fever, and even of black vomit, as I witnessed during my stay in the country.

“To the stranger residing at San José, the rainy season is an absolute nuisance. The roads which branch off from the town become impassable, and he is therefore debarred from taking any foot-exercise. It generally rains every afternoon, the mornings alone being fine. Between 12 and 2, during this portion of the year, heavy opaque vapors curl over the summits of the Cordilleras (which surround the valley), and rest entangled among the tops of the dense forest which clothes the heights. Loud claps of thunder echo from mountain to mountain. As the clouds accumulate, they creep along the declivity or move between the outstanding spurs of the main chain; here they are luminous from the rays of the sun, while further, under the shadow of the mountains, they remain dark and threatening; their masses, slowly or rapidly moving, according to the direction and strength of the winds which blow through the gorges, mingle in strange contrast. As the storm increases, the vapors sweep down the mountain ridges into the valley, and suddenly the whole surrounding country is lost to your view. Sometimes this thick and stormy weather lasts two and three weeks, with only a short and occasional lull. This the natives call a “temporal.” Fortunately, the “temporal” is not of frequent occurrence. I did not witness one during the rainy season I passed in Costa Rica.”—*Letters from Costa Rica, by a British Consul*, 1854.

San Juan, the *Desaguedero*, or drain of the great Nicaraguan basin. On the Atlantic declivity proper there are but two or three streams worthy of mention, the Reventazon and Matina, both of which have their sources in the mountains of Cartago. None of these streams are navigable except for canoes, and with these only for short distances. The Serapiqui is thus made available for perhaps twenty miles above its junction with the San Juan; and it is affirmed that the Rios Frio and San Carlos can be ascended by canoes for still greater distances. There are several small lakes in the state, Socorro, Surtidor, and Barba, at the Atlantic base of the Cordilleras, and Ochomogo, a picturesque little body of water near Cartago. Molina imagines that others may be discovered in the parts of the state still unexplored.

Two considerable bays penetrate the land on the Pacific side: the Gulf of Nicoya, extending between fifty and sixty miles inland, and upon which is Punta Arenas, the principal port of the state; and the fine bay called Golfo Dulce, at the southwestern extremity of the republic, around which the French have obtained concessions of lands for purposes of colonization. On the Atlantic is the well-known bay, studded with islands, the Abuerma of Columbus, and Chiriqui Lagoon of modern maps, which, however, is claimed and occupied by New Granada. Another and smaller bay, and one which offers many facilities for commercial purposes, is that of Salinas, falling within the disputed department of Guanacaste. Separated by only a narrow isthmus, twenty miles wide, from Lake Nicaragua, it has attracted attention as an advantageous terminus for the proposed inter-oceanic canal on the Pacific. A number of small islands in the Gulfs of Nicoya and

Dulce pertain to Costa Rica. The largest is that of Chira, near the head of the Gulf of Nicoya.

The natural products of Costa Rica are various and valuable, and nearly all the great tropical staples may be cultivated with success and profit. The excessive rains, however, are unfavorable to the cultivation of cochineal, cotton, and the vine, and destroy the crops as they approach maturity. Indigo of good quality has been produced in the country, and the sugar is regarded as in no respect inferior to that of Havana. Formerly, considerable quantities were exported to Chili and Peru. The cacao-tree flourishes in a few localities, as in the valley of the Rio Matina, but the country is generally too high and too cold for its successful cultivation. In the more elevated districts, the *tierras templadas* and *frias*, are found many of the products of the temperate zone—wheat, potatoes, apples, etc. But the great staple of Costa Rica—that which constitutes its principal source of wealth, and has raised it, from being the poorest, to be relatively the richest state of Central America, is coffee. Up to the year 1829, the principal, almost the sole export of the state, was Brazil wood, from the sale of which the people derived a scant supply of foreign manufactures. Agriculture was pursued only to the extent of meeting the positive necessities of the people, and the miserable condition of the state was often held up as a ludicrous commentary upon its sounding name, Costa Rica, or the Rich Coast. In that year, however, a few enterprising men united in establishing an experimental coffee plantation. Two or three years sufficed to show that both soil and climate were favorable to the growth and perfection of the plant; and a few additional experiments, each attended with remarkable success, suf-

ficed to direct whatever of enterprise and capital the state possessed into this new and profitable branch of industry. Plantations sprung up on every side, and coffee soon became the principal, in fact, almost the sole article of export. In 1845, not less than 5,000,000 lbs. were sent to foreign markets; in 1848, 10,000,000; in 1850, 14,000,000—equal to a product of more than 100 pounds per head for the entire population of the state. The years 1856–7, during which the state was involved in war and visited by the cholera, do not show a corresponding increase; on the contrary, there seems to have been a considerable falling off both in the production and export. The quality of the Costa Rica coffee is good, ranking second only to the best Oriental varieties. In the country, delivered on the Pacific coast, it commands from 8 to 9 cents per pound. In the English market, to which it is chiefly sent, it brings 22 cents, and is always in good demand.

Most of the coffee plantations are in the neighborhood of the capital, San José, where the country is quite level, and where the soil is a dark loam, largely intermixed with volcanic materials. The trees are planted in rows three yards apart, and one yard from each other. The weeds are kept down, and the earth slightly turned with a hoe three or four times in the year. The plants or trees are constantly pruned down, and, for convenience of gathering the fruit, seldom suffered to rise above six feet from the ground. They begin to flower in March and April, and in the plain of San José, the berry, resembling the wild cherry in form and appearance, ripens in November and December. Its maturity is indicated by a red or ruddy color, and it is then gathered as rapidly as possible, men, women, and children joining in the harvest, and piled

for forty-eight hours in heaps to soften the pulp, after which time it is thrown into a tank, through which a stream of water is conducted, and constantly stirred about, by which means the pulp is separated and carried off. It is next spread out on a platform in the sun to dry. There then remains a husk enveloping the berry, which is either removed by treading the berries under the feet of oxen, or by means of mills, which break the husks and drive them off by means of fanners. It requires about three years from the period of planting to get a coffee estate in full bearing. The cost, of course, depends greatly on the price of land and labor; but when the estate is fairly established, it has been found that the cost of producing the coffee is from \$2 50 to \$3 per *quintal* of 101 lbs. The sole means of getting the coffee to market has hitherto been by carts and mules to the port of Punta Arenas on the Pacific, and thence by sea, around Cape Horn, to England; a long and expensive route, in which the coffee incurred great risk of damage or deterioration. The opening of the Panama railway, and the establishment of a monthly line of steamers running coastwise in connection with it, will, however, give this staple a new direction, and probably go far to augment its production. Interior communication, nevertheless, is still difficult, and the cost of transporting the coffee from San José to the coast, a distance of about 70 miles, ranges from \$15 to \$20 per ton.

In respect of minerals, so far as yet known, Costa Rica is less favored than most of the other Central American states. Rich mines of gold are said to exist in the unexplored districts bordering on New Granada, but our information concerning them is exceedingly vague, derived chiefly from the traditions con-

cerning the Indian mines of Tisingal. In the mountains of Aguacate, and at a point called Cuesta de Jocote, there are gold mines, worked, with moderate profit, by Europeans. Beds of bituminous coal, of the variety known as brown coal, are known to exist in some of the islands of Chiriqui Lagoon, which several foreign companies have undertaken to work, under grants from the government, but without success. As these islands have now passed definitively under the authority of New Granada, the grants alluded to will probably be surrendered. Pearl-fishing is carried on to a considerable extent, and with fair success, by the Indians on the coast of the Peninsula of Nicoya. The shell of the pearl oyster, "mother-of-pearl," is an established article of export.

Although Costa Rica has several harbors on the Pacific, yet the only one which has been authorized as a port is that of Punta Arenas, in the Gulf of Nicoya. It was established in 1847, and received a considerable impulse from having had accorded to it, for three years, the privileges of a free port. This privilege has since been extended, and no duties, anchorage or tonnage, are imposed on ships, nor is merchandise subject to imposts except when moved into the interior, a custom-house being established at a point called "Garita del Rio Grande," five leagues from the capital. As its name implies, it is situated on a sandy point projecting into the gulf. There is an outer and inner harbor, the latter formed between the sand-spit and main land, and accessible only for vessels of very light draught. The former is an indifferent anchorage, protected by two islands from the swell of the Pacific rolling into the Gulf of Nicoya. Vessels drawing more than seven feet of water must anchor in the outer harbor, a league

from the landing-place. All goods have therefore to be brought ashore, as at Panama, in lighters, at half tide, and the operation is attended with great delay and no inconsiderable risk. The village, as already stated, is built on the bare sand-spit, which is nowhere elevated more than ten feet above the water, and which produces only a few wild indigo plants, and a poisonous shrub called *manzanilla*. Punta Arenas, although far from healthy, is certainly less deadly than the port of Caldera, which it has replaced, and which was abandoned on account of its insalubrity.* According to the report of the Minister of War and the Treasury for the year ending December 31st, 1855, the maritime movement of Punta Arenas for that year was as follows: "Vessels entered, 85; vessels sailed, 67; total tonnage, 25,000 tons; number of crews, 1226; number of passengers, 600, almost all proceeding from Panama to the ports of Central America. The value of exports and imports for the same year he estimated at \$2,500,000." As Punta Arenas may be said to be the only port of Costa Rica, the following comparative table of its annual maritime movement for five years may not be without interest:

* "In respect of salubrity, little can be said in favor of Punta Arenas. It is troubled with fevers throughout the year, which equally assail natives and strangers; but those contracted in the dry season are little dangerous, while those which prevail during the rainy season take a fatal type. Nevertheless, it may be said that probably there are here fewer victims than at other points on the coast."—*Rapport de Capitain M. T. de Lapelin, de la Marine Française*, p. 62.

MARITIME MOVEMENT OF THE PORT OF PUNTA ARENAS.

Countries whence proceeding.	1850.		1851.		1852.		1853.		1855.	
	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.
From England	20	4,775	25	6,776	23	5,459	17	4,819	6	1,529
" United States . . .	13	3,163	22	4,726	13	2,738	11	2,177	11	1,820
" France	4	888	5	1,151	5	1,390	2	506	2	683
" Spain	2	616	2	580	7	1,407	5	833	2	560
" Hamburg . . . . .	...	...	1	102	6	900	3	332	5	950
" Denmark	7	1,271	1	127	5	849	...	...	...	...
" Belgium	3	750	...	...	...	...	1	255	...	...
" Sardinia	1	255	3	543	3	856	3	675	8	1,444
" Bremen . . . . .	...	...	1	120	...	...	...	...	...	...
" Prussia . . . . .	...	...	2	504	...	...	...	...	...	...
" Chile	3	689	3	683	10	1,967	4	655	6	770
" Peru	4	618	10	1,475	1	49	8	1,247	7	1,103
" Ecuador	5	186	2	38	1	67	1	36	...	...
" New Granada . . .	11	941	6	406	7	934	5	315	9	654
" Costa Rica	3	90	8	504	18	1,363	10	1,070	13	1,198
" San Salvador . . .	...	...	...	...	3	450	9	1,018	...	...
" Mexico . . . . .	...	...	...	...	1	50	1	137	...	...
" Honduras . . . . .	...	...	...	...	...	...	...	...	3	350
Totals	76	14,242	91	17,735	103	18,479	80	14,075	72	11,061

From Punta Arenas to the capital, San José, a distance of 75 miles, there is a road, the only one in the state deserving the name, which has been gradually improved so as to be traversed by carts. Within a year, a tram-road eight miles long (sometimes called a railway) has been built from the port to the foot of the high grounds.* A duty is levied on all carts, which goes toward keeping up the cart-road, and for the construction of edifices, something like the *tambos* of the ancient Peruvians, for the shelter of travelers and cargoes. The carts generally occupy from four to five days in descending to the port, and from five to six in returning, according to the season.

Upon the Atlantic there is no harbor deserving the name. There is an open anchorage at Salt Creek (Moin) and Matina, with which points a small commerce is kept up, chiefly with Jamaica, in sarsaparilla, turtle-shells, and cocoanut oil. There is a wild mountain path between Cartago and Matina, which the people of the former have endeavored to improve so as to open direct communication with the Atlantic, a distance of not more than 70 miles. But the physical difficulties which intervene, high mountains, rapid torrents, and dense, tangled forests, as well as the insalubrity and general disadvantages of Matina itself, have discouraged the enterprise, which will scarcely be carried out during this generation. Hitherto, and until the establishment of a regular line of steamers connecting the Pacific ports of Central America with Panama, the foreign correspondence and travel of Costa Rica were chiefly carried on through the port of San Juan

* This work, which cost about \$70,000, has entirely failed in its purposes. The cartmen from the interior demand no more to take a load of coffee to the port than to the nearest extremity of the road.

de Nicaragua, with which communication was kept up by means of a mule-path from San José to a point on the Serapiqui River called "El Muelle," 66 miles, and thence by canoes down the Serapiqui to the River San Juan, and the port of the same name, a further distance of 45 miles, or 111 miles in all.* Detached efforts have been made to open this road for carts, and several companies have been organized for the purpose, but the most that has been done is the construction of an indifferent cart-road from San José to Buenavista, a distance of 25 miles. With a settlement of the political status of the port of San Juan, and the permanent establishment of communication thence to Europe and the United States, it is probable the route by way of the Serapiqui and San Juan may be so improved as to supersede, in great part, that by way of Punta Arenas and Panama. It will, however, always be subject to interruption, unless the relations between Costa Rica and Nicaragua shall be put on such a footing, and under such guarantees as shall insure to the former equal and permanent privileges in the use of the river and port of San Juan. It is both fair and fraternal that Costa Rica should have such privileges, but it may well be

* "The *Muelle* is certainly a curious place; a sort of promontory formed by the tangled roots of a huge tree which has seen many centuries, and which rises to an immense height, projecting into the river, and serving as a natural, but not very acceptable stairs by which to climb the bank. The spot is the military frontier-post of Costa Rica, under the command of Don Pedro Torras, who was standing, surrounded by a few ragged soldiers, on the embankment as we moored our boat to the naked roots of the tree. We had been told at San Juan that the house of the commandant was upon a height; we therefore fondly imagined that we should find a house, and that the house of a commandant must surely be a comfortable one. It, however, proved a mere shed, wholly constructed of canes three inches apart. It had a loft or second story, which was the commandant's sleeping-room (the flooring of which was also made of cane), with a notched young tree for stairs, reminding me of the engravings I had seen, when a child, of the Esquimaux huts."—*Letters from Costa Rica, by a British Consul.*

doubted if she will be able to secure them by setting up unfounded territorial pretensions over any part of the port or river.*

* "The natives of Costa Rica are extremely jealous of foreign influence, and, though they are very willing to be benefited by foreign capital, they are desirous of reaping this benefit in a most selfish manner, by absorbing all the wealth which this capital will create. This feeling induced them, when they formed a company for the building of a road from the capital to the Serapiqui River, to exclude all foreigners from participation therein, by enacting that none but a native could be a stockholder. In this short-sighted policy they have persisted ever since, and still will persevere, until they have learned, to their irretrievable cost, that without foreign aid they are incapable of doing any thing. The Costa Ricans appear fated to do the reverse of what civilized nations have done; they exclude foreigners from their public works, such as roads, etc., while they allow them to hold real estate. I am convinced that this contradiction in their acts proceeds in a greater measure from the exclusiveness of their egotism than from any want of knowledge of their true interests."—*Letters from Costa Rica, by a British Consul.*

CHAPTER XXI.

THE CAPITAL—PRINCIPAL TOWNS—CHARACTER OF POPULATION—GOVERNMENT—JUDICIARY—RELIGION—EDUCATION—REVENUES—COMMERCE—COLONIZATION PROJECTS, ETC.

SAN JOSÉ, the capital of Costa Rica, is situated in the table-land formed between the mountains of Dota or Herradura on the south, and those of Barba on the north, nearly midway between the seas, at an elevation of 4500 feet. On one side flows the Rio Torres, and on the other the Rio Maria Aguilar, between which the streets are laid out with great regularity. The buildings, owing to the frequency of volcanoes, are low and far from imposing, and its churches, for the same reason, are small and mean. The town, in fact, owes its origin to the earthquakes which seventy years ago nearly destroyed the ancient capital, Cartago, and which induced a large part of its inhabitants to seek a new abode. It now contains between 15,000 and 16,000 souls, although the number included within its municipal jurisdiction is estimated at not far from 30,000.*

* “The valley of San José is very beautiful. It occupies the centre of the mountainous region of the isthmus, at a like distance from both oceans. Its direction is west to east. Around the capital the ground rises by huge waves eastward to the base of the volcano of Cartago; north, by more gentle slopes, to the Barba peaks; southward it swells to form the San Miguel Mountains; while to the west the soil declines, gradually the undulations disappear, and the broken ground becomes the level plains of the Carmen, where large protruding rocks of calcined porphyry tell the tale of some vast explosion from the now extinct volcano of Barba. Suddenly the inclination of the ground becomes more marked,

Cartago, situated six leagues to the eastward of San José, is the oldest town of the state, and was the seat

and you now stand on the brink of a dark and deep ravine—a huge rent in the earth, in the sombre depths of which you hear the roar of the rushing waters of the Río Grande. The road descends and winds along the outstanding peaks of the ravine walls, with a good stone bridge built over the torrent, climbs the opposite wall to the plains beyond, near the base of the Aguacate Mountains, and through the passes of the mining district leads the traveler to the Pacific coast and the shipping port of Punta Arenas.

“From the Cordilleras which surround the valley rush innumerable streams, which, bounding over their rocky beds, fertilize the grounds in every direction, and, uniting at the confines of the valley, combine to form the Río Grande. The principal of these streams are the following: from the Barba Mountains two rivers descend and pour their waters into the Río Grande above the spot where the Punta Arenas road crosses it: they are the Río de Alajuela and the Río Segundo. From the northern end of the Cartago road there flows across the valley a small stream, called the Virilla, into the Torres, to the west of San José. The Torres, the María Aguilar, and the Ciribí have their sources in the Irasú volcano, and wind parallel to the San Miguel Mountains—the latter at their very base, the two former north and south of the capital. All these rivers are mere mountain torrents, tortuous, incased in deep rocky channels, shallow and limpid in summer, rapid, angry, and turbid in their sudden rise during the rainy season.

“The upper part of the valley is laid out in plantations of coffee, but the lower plains of the Carmen are merely used as grazing grounds. The fences which portion off the plantations are formed by driving into the earth stakes of green wood; these soon take root and grow into trees, which overshadow the paths, the intervals between them being filled with cacti. It is delightful to ramble of an evening, as the sun sets behind the high peaks of the Cordilleras, through those avenues, and enjoy the freshening air and avoid the stifling dust which the wind raises along the high roads. Unfortunately, in winter time these lanes and shady paths become impassable from the heavy rains and mud.

“There are three large buildings in course of construction at San José, a palace, a University, and a hospital. The palace is badly placed at the intersection of two streets; its true site should have been one side of the large square, on the spot occupied by the barracks, which could have been removed elsewhere. The University is a well-executed building, with several large halls. When finished, it will be the only building worth seeing in San José. As to the hospital, it is in an unwholesome position; placed on the low ground in the outskirts of the town, it must necessarily be fatally damp during the greater part of the year; and its ventilation is so very bad—all the windows being opened on one side only of the building—that persons in good health would sicken within its walls for want of air. Moreover, the windows are so small, and placed so high from the floor, that the rooms are nearly in complete darkness at midday. It is unfortunate that the benevolent intentions of its founders should be thus frustrated by the ignorance of the man who undertook to draw the plan of this hospital.”—*Letters from Costa Rica, by a British Consul.*

of the colonial government. Although it has lost its political importance, and has been nearly ruined by earthquakes, it still preserves traces of its former magnificence. Its churches were described by Mr. Stephens, in 1840, as large and imposing; but even then he rode through long and desolate streets, relieved by scarcely a single sign of life. On the 2d of September, 1841, it again suffered severe shocks of earthquakes, which threw down most of its remaining buildings, killing a considerable number of the inhabitants, and driving another large portion to seek a permanent refuge elsewhere. It seems probable that it will soon be entirely abandoned, and its site be marked only by a heap of ruins.

Heredia and Alajuela, distant from San José two and four leagues respectively, are the only remaining large towns in the state, each containing about 10,000 inhabitants. The people of Alajuela are chiefly occupied in raising cattle and in the production of sugar, with which they supply the state.

The people of Costa Rica have a larger proportion of pure Spanish blood, less intermixed with that of the negro and Indian, than those of any other Central American state; and if they have attained a greater prosperity, and evinced a greater degree of activity and enterprise, materially and otherwise, it may fairly be attributed to this circumstance. Dr. Wagner observes that "the intermixture of Indian is perceptible in many faces," and that it may be assumed, among the rustic population, that every fifth person has traces more or less marked of Indian or negro blood. Here, as every where else throughout Central America, the females predominate over the males. Wagner estimates the difference at one fifth.

G g

Costa Rica, as a province of the Captain Generalcy of Guatemala, became one of the five states which composed the Republic of Central America subsequently to the separation from Spain. But, although widely removed from the centre of political intrigue and commotion in Guatemala, she did not wholly escape the dissensions which disturbed the peace and retarded the prosperity of the other states. Her revolutions, however, were generally less bloody than those of Guatemala and Nicaragua, owing, probably, rather to the circumstance of the concentration and homogeneousness of its population than to a higher morality or a more tolerant spirit. For five years, from the period of the dissolution of the federation in 1839, to the first formal assumption of independent sovereignty in 1844, the state held an anomalous position, being, for the greater part of the time, under the dictatorship of Don Braulio Carillo, a man of energetic character, who exercised power without the intervention of Legislature or ministers. His rule gradually prepared the people for the proclamation of the state as a sovereign and independent republic, which took place on the event of his death in 1845. Since that period, interrupted only by occasional violent changes in its *personelle*, the government has been carried on by a president, and a Congress composed of twelve deputies. The president is elected for six years, as are also the deputies; one half of these, however, go out every third year. They meet in a single chamber, and are presided over by the Vice-President. The Judiciary of the state, which administers the old Spanish law, with a few modifications from the French code, consists of a Supreme Court, composed of a president (*rejente*), five magistrates, an attorney general, and nine *suplentes*, or supplement-

ary judges. This court is divided into two chambers, each formed by a president, two magistrates, and two of the supplementary judges. Both of these chambers are Courts of Appeal. Every Monday they meet collectively as the Supreme Court, under the presidency of the "rejente," to decide all questions of law brought before them by the inferior courts. It is only before this court that a member of the house of Congress can be brought for trial.

Next, and below the Supreme Court, are the Courts of First Instance, of which there are two for the capital, one for civil, and the other for criminal cases. The other provinces of the republic, such as Heredia, Alajuela, Cartago, and Guanacaste, have each only one Court of First Instance. Punta Arenas, however, being a free port, has its own magistrates.

For each provincial capital there are three *alcaldes*, with three "suplentes," who, when not acting as magistrates, form the municipality, or town council. In the provincial departments there are other *alcaldes*, one or several to each department, according to the population. In each rural district there is a justice of the peace, whose jurisdiction extends over all cases of a value below *two dollars*; and, lastly, there is a petty officer who decides all cases not above *one dollar*, from whose sentence there is no appeal. Lastly, there are two other magistrates, called the "Juez" and the "Fiscal de Hacienda," to whom are intrusted all cases arising from the recovery of duties.

The predominant religion of Costa Rica, in common with that of all Spanish America, is the Roman Catholic; but the Constitution, by implication, supported by the special provisions of treaties with Great Britain and the United States, permits unrestricted freedom of be-

lief and worship. The treaty concluded with Great Britain in 1849 provides that British residents "shall not be disturbed, molested, or annoyed in any manner on account of their religious belief, nor in the proper exercise of their religion, either within their own private houses, or in the places of worship destined for that purpose." The protective effects of this treaty have been lately extended to Protestants of every other nation residing in Costa Rica by the establishment of an association of all the Protestants in the country for the erection and endowment of a chapel and school, the object in view being to insure the education of the children of Protestant families in the faith of their parents, and to render possible the intermarriage of Protestants, hitherto prevented by the absence of a clergyman of their own communion.

In singular contradiction to the spirit, if not the letter of both the Constitution and the treaties referred to, is the provision in the Concordat between the state and the Pope, by which all public schools are put under the control of the clergy. In 1850 there were in the republic 45 churches and 61 priests. The latter, by the terms of the Concordat, are placed, under certain restrictions, within the immediate jurisdiction of the government. There is little of religious bigotry except among the lower orders. The better classes and the educated part of the community acquiesce rather than participate in the pretensions and formulas of the Church. An intelligent and impartial observer remarks that "the reflecting portion of the people have become Atheists, and that among all ranks the Catholic faith is gradually giving place to religious indifference."*

* "The fact is, that the clergy in Costa Rica have lost much of their influence over the people. The mode of life of the priest is certainly not calculated to

General education in Costa Rica, as in all the Central American states, is at a very low ebb. Molina reports 79 primary schools as in existence in 1851. There is a University in San José. It has an endowment of \$46,310, and receives a fourth part of the net proceeds of the tobacco monopoly. In 1851 it had twelve professors and 150 students.*

The revenues of Costa Rica are derived entirely from duties on imports, from the spirit and tobacco monopolies, and from sales of public lands. The following

inspire respect, for his actions are in direct and barefaced violation of his clerical vows; his children are known, while too often the mother is the wedded wife of one of his parishioners. His speech also and his demeanor are frequently mockeries of his mission, and his daily avocations in contradiction to his character; for he is not only a planter, but a daring speculator on the rise and fall of the great staple of the country, and he may be said to use his robes for no other purpose but to shield himself from the uncertainty of commercial operations.

“But what has contributed far more than such conduct to produce the indifference of the lower class and the Voltairianism of the higher in Costa Rica, was the attempt of the bishop to subject the coffee-crop to the Church tithes; a demand which, if granted, would have reduced the clear revenue of every citizen by at least one fifth. The discussion on this question in the House of Representatives was an angry one, and, as the bishop saw the fair prospect (it would have given him a revenue of \$60,000) gradually vanish from his longing sight, he addressed his flock from the pulpit, and spoke feelingly of *his* wrongs and of the waning faith of the age. The government never forgot this appeal to unlawful sympathies, and the President, in his inaugural speech, alluded to it in the following words: ‘On repeated occasions we have seen that the revolutionary spirit not only agitates in the barracks, but also penetrates sometimes in regions which should be closed to it, and even desecrates sanctuaries apparently inaccessible to human passions.’”—*Letters from Costa Rica, by a British Consul.*

* “I have spoken of the University, but it must be understood that I meant merely the building which bears this pompous title, for the class which is held in one of its rooms can hardly be compared to an ordinary grammar-school in the United States; and I should say of the other day-schools dispersed throughout the interesting little republic, that they are more like the ragged schools of England than aught else. The proportion of the children which are sent to school to the whole infantile population is about one in one hundred; and hitherto (I am inclined to think that this will be the case for many years to come) the young men destined to the liberal professions, such as they are, have always been sent to study in Guatemala. I must mention, however, that the rich merchants are beginning to educate their children in England.”—*Letters from Costa Rica, by a British Consul.*

table presents the amounts derived from all sources for five years :

	1850.	1851.	1854.	1855.	1856.
Receipts . .	\$229,406	\$266,845	\$485,957	\$506,920	\$655,028
Exp'ditures		144,577			471,554

Of the total revenue for 1856, but \$113,564 were received in the form of duties on imports, namely :

Custom-house of Serapiquí	\$9,471
“ “ Punta Arenas	2,072
Garita del Rio Grande	102,021
Total	\$113,564

The tobacco monopoly for the same year gave \$218,149; that of aguardiente, \$70,000.

The custom-house duties are not levied on the values of imports, but on their weight, package included. Reduced to the more intelligible *ad valorem* form, the average rate is about 15 to 20 per cent. on invoice prices. Merchants are allowed a credit of six months in paying the duties, one fifth to be paid in coin, and the remaining four fifths in *vales*, a kind of treasury notes or government certificates, which are usually at a discount of from six to ten per cent., and which are chiefly redeemed in this way. As there are no manufactures worth mentioning in the state, the supply of goods for consumption is drawn from abroad, principally from Great Britain, which is the largest purchaser of the staple of the country, coffee. The average annual value of goods consumed is not far from \$1,250,000, supplied very nearly in the following proportions at invoice prices :

From Great Britain .	{ Manchester goods . . . \$350,000	} \$500,000
	{ Birmingham goods . . 40,000	
	{ London (including Chi- na goods, \$10,000) . . 40,000	
	{ Glasgow 70,000	
From France	40,000	
“ Germany (Hamburg)	32,000	
“ Spain	8,000	
“ United States	50,000	
“ Chile	7,000	
“ Ecuador	9,000	
“ Guatemala	35,000	
“ Nicaragua	20,000	
“ Salvador and Honduras	50,000	
Total		\$751,000

Add to this amount duties and expenses, and the total cost to the merchants can not fall much below \$1,200,000, nor to the consumers at large below \$1,500,000, or about \$10 per head. The Minister of the Treasury estimated the value of imports for 1852 at \$793,000, of which \$80,000 were entered free of duty; and as the receipts from customs for that year were \$105,000, we may calculate the total value of imports for 1856, when the revenue from this source was \$113,000, at not far from \$900,000. The exports of the country for 1852 are given as follows:

67,776 quintals of coffee, at an average value at the port of Punta Arenas of \$9	\$609,984
5,000 quintals of sugar, at \$4	20,000
5,000 hides, at \$1.25	6,250
800 pounds of tortoise shell, at \$4	3,200
200 quintals of sarsaparilla, at \$16	3,200
Provisions exported to various parts . .	10,000
Total of exports	\$652,634

For 1853, as follows:

80,000 quintals, which, at an average of \$9, gives	
an amount of	\$720,000
Other articles	45,000
Total	<u>\$765,000</u>

These returns show that for the years 1852–3 the value of imports considerably exceeded that of exports, and this difference must have been increased during the years 1856–7 in consequence of war and pestilence. It is estimated that the state lost not less than 4000 men in the field, and that 8000 people of all ages and sexes died of cholera during those two years. These losses, not less than the general discouragement of industry which follows on wars and epidemics, must have seriously reduced the amount of exportable products, and placed the country still deeper in debt to its foreign creditors. It nevertheless has abundant and growing resources, and when we reflect that not more than thirty years ago the whole commerce of the state was less than \$200,000, we can not doubt that the future will bring with it an increase of population and wealth which will speedily liquidate all commercial balances, and make the country rich and independent.*

Among the various financial schemes which have been started in the country as a sure means of promoting its prosperity, the establishment of a national

* The production of coffee for the year 1857 is estimated by the “Cronica,” a semi-official journal published in San José, at 110,000 quintals; but this is doubtless an exaggeration. The same authority gives \$844,295 as the value of exports for the year 1856, as follows:

Coffee, to Great Britain, 4,999,200 pounds, valued at	\$429,900
“ “ United States, 297,000 “ “	29,700
“ “ Other countries..... “	291,530
Hides, sarsaparilla, etc. “	93,165
Total.....	<u>\$844,295</u>

Apart from coarse cottons, of which nearly the supply is drawn from the United States, the imports from the latter country for 1856 were, malt and hops, \$800; provisions, \$175; tobacco, \$27,615; drugs, \$150; and flour, \$18,730.

bank is the latest and most doubtful. A "contract" for this purpose was made on the 2d of July, 1857, with Don Crisanto Medina, a merchant of repute. The title of the institution is to be "Banco Nacional Costaricense," with a maximum capital of \$1,000,000; to start, however, on \$250,000, and to be increased as deemed proper by the government. It is to be a bank of deposit and circulation, but notes are not to be issued to more than double the amount of available assets in hand. These notes are to be countersigned by the government treasurer, and are to be legal tender in all parts of the state, and receivable for government dues. The bank may fix its rate of interest on loans by contract, not to exceed one per cent. per month. It may receive deposits, allowing such interest as may be agreed upon, and make advances on foreign consignments. Its capital is exempt from all kinds of taxation. The managing directors must reside in the capital, nor can they leave it without permission of the government, which is to have credit to an amount of a fourth part of the circulation, on security of the public revenues or other government assets. A fourth part of the capital must be subscribed by citizens of the state, and the organization must be effected by the 1st of January, 1858. It may be doubted if these stipulations have been met.

The government of Costa Rica has not been blind to the advantages, not to say necessity of foreign immigration. With a comparatively large territory and small population, without manufactures, and destitute of skill even in the common arts, it has long been evident that there could be no considerable advancement, or any thing beyond a relative civilization in the state, without the introduction of new elements in the popu-

lation. Considerable inducements have, in consequence, been offered from time to time to European colonists, in the way of concessions in lands. In 1849, a large tract of coast around the Gulf of Dulce, on the Pacific, twenty leagues in length by twelve broad, was conceded to a French company, on condition that 1000 colonists should be established thereon within seven years. The port was to be free, and the colonists exempt from all kinds of imposts for fifteen years. It does not appear, however, that the conditions of the contract were fulfilled, although an establishment was made under it, and a considerable number of immigrants induced to attempt a permanent settlement. The mistake seems to have consisted in placing a body of men unacquainted with tropical agriculture where there were no ready means of procuring supplies or disposing of products, and where the purchase of the first and the sale of the latter must be attended with a maximum of trouble and expense. A similar concession was subsequently made on the Atlantic coast to an English organization; but neither the character of the company nor the nature of the lands conceded was favorable to success, and nothing whatever was effected under the grant. Another concession was made in 1852 to a German company, organized in Berlin, which seems to have undertaken in good faith to carry out its obligations, although, it is said, both the government and people of the state became early disposed to regard it with disfavor. The grant covers 54 square miles, situated in the valley of the Rio Reventazon, on the Atlantic declivity of the Cordilleras, between the town of Cartago and the ocean. It was made on condition that 7000 adult colonists should be settled on the lands within twenty years. An additional absolute

concession of 32 acres for each colonist was also made, but the principal grant was to be forfeited if the main condition be not fulfilled. The locality of the projected colony is thus described by a gentleman who visited it in the year 1855:

“At midday we discovered the small and romantic valley of Turialva; the haze of noon danced around the landscape, and gave it the rich tint of southern climates as we viewed it from the height where we stood, away below us in the distance: it was truly beautiful. I had fancied that Turialva was quite a large settlement, and was surprised to find that it contained only one house and a few huts. After following for a short space the border of the Turialva River, we re-entered the forest, through which a clearing has been cut of some ten yards in breadth, and over which the tangled roots and stumps of trees, half hidden in the mud, render the traveler’s safety a question of chance and of good luck.

“It was late in the day as we descended the mountain, at the foot of which flow the rapid waters of the Reventazon, and as we discovered the bridge my companion exclaimed that it was broken. It certainly appeared so, for there was a depression of nearly three feet in the centre. We found a man at the entrance of the bridge, who told us that it was unsafe, and that we must dismount and pass one at a time, lest our combined weight should cause it to fall. The bridge was constructed of five trees laid across the river, resting either end on huge rocks heaped on each bank by the hand of nature, and forming the abutments of the bridge; thirty feet below, the waters rushed with violence, at the rate of twenty miles per hour. I measured with a glance the length of the bridge; it must have been upward of seventy yards (it was seventy-three, as I was informed by Baron Bulow, the director of the colony), and it was not without some anxiety that each in turn passed over it at a slow pace, the rotten beams bending and vibrating beneath our weight at every step we took.

“The baron was in the midst of his workmen. He appeared very happy to see us, and welcomed us to his rustic retreat.

His house was nearly finished, and has been built on the plan of a Swiss cottage, on the brow of a hill, in full view of the volcano of Turialva, which shows its mighty head far above the intervening mountains. In whichever direction you look from the balcony of his house, the primeval forest meets the eye. The whole country around is a succession of hills and valleys of great fertility. About fifty or sixty acres have been cleared in the vicinity of the house, but the colony as yet exists only in the sanguine imagination of its projector, who, unfortunately for the success of his undertaking, wastes his energies and money, which would be better employed on the colony, in searching the track of the road the native company of Cartago undertook to open. The site of this future colony is lower than the level of the central valleys; it enjoys, therefore, a warmer and pleasanter climate. We remained two days with the worthy baron, and listened attentively to the endless explanations he chose to give us, as he pointed from the open gallery of his cottage to the thickly wooded valley of Tuis, where in course of time he hopes to see thriving villages and highly cultivated fields, in lieu of the trackless forest which now clothes the surrounding country."

Baron Bulow, the projector of this company, died in 1856, and it is probable that his scheme expired with him.

Another attempt at colonization has been made by Don Crisanto Medina, a native of the country, who obtained a large grant of lands for that purpose at the foot of the volcano of Mirivalles. The grant embraces a beautiful table-land, elevated 2500 feet above the sea, and situated about midway between Lake Nicaragua and the Gulf of Nicoya. The inducements held out to colonists are ten acres of land to each family, a temporary dwelling, provisions for six months, and the use of a cow and ox for one year—all for \$80, to be paid in ten years in equal annual installments. In 1852 thirty-seven Germans had established themselves

here, but it is not improbable that the colony has by this time been abandoned.*

Unfortunately for the success of colonization in Costa Rica, it is encouraged impulsively, and not steadily and consistently supported. The government and people could have good roads and buildings with some sort of architectural pretensions, but, like children, they rebel against the patient exertion which is necessary to secure them. They would be glad to have the vast forests which cover the country cleared off, and the land made to bloom under the systematic and intelligent culture of foreign colonists, but they become jealous of the stranger when he arrives; his success vexes them, and, so far from binding him to the country of his adoption by agreeable associations and a friendly policy, they thwart his enterprises and embarrass his movements, and by a system of petty annoyances soon drive him in disgust from their shores. They have also yet to learn that colonization by companies under grants, which from necessity can only be made in remote districts, away from roads, and without available resources near at hand, have but little chance of success. To insure a useful emigration, encouragement

* "In the fall of the year 1850, a vessel with 51 persons sailed from Bremen for Costa Rica. They all left their homes with the hope and almost the certainty of bettering their condition in the New World, all looking forward with delight to the happy life which awaited them in the land of eternal spring in Costa Rica. They arrived, after two months' sail, at the port of San Juan, and continued their journey, surrounded by great difficulties and privations, to San José. Three years have passed since these 51 emigrants paddled in their frail bongo up the Serapiqui River, and what was their fate? Out of 51 persons only three families are alive, all the rest having succumbed to circumstances for which they were not prepared. Nineteen died at San José soon after their arrival; nine are interred at the landing on the Serapiqui; nine died at Miravalles; four at Alajuela; and the bones of a carpenter from Saxony, who, from certain indications, had probably been torn in pieces by a voracious tiger, while he was sleeping at night in the forest, on his journey to San José, lie buried, together with his wife and child, under the evergreen tombs at San Miguel."—*Carl Scherzer*.

should rather be given to individuals to settle among the people themselves, and by example and instruction elevate their tastes and habits, and diffuse the useful arts, in respect of which the country is deplorably behind the age.*

Foreigners are authorized to hold real estate in their own name, and transmit it after their death, by testament, to their offspring or next of kin; but it is important, when they become possessors of real property by private purchase, to see that the right of pre-emption has been attended to, as an omission in this respect would invalidate their title-deeds. The law requires that the vender shall successively inform his immediate neighbors of the sale (beginning with the proprietor whose estate has the greater extent of border on his land), and give them the option of taking it at the offered price. The usual way of avoiding this law is by adding to the price of the purchase the value

* "To develop the resources, vegetable, mineral, and commercial of Costa Rica, a large immigration from Europe or from the United States is absolutely necessary; and it would be the well-understood interest of the government and people of Costa Rica to further, by every means in their power, such an immigration; but their jealousy of foreigners does not allow them to continue this course. It is important that the emigrants from Europe who wish to settle in Costa Rica should consider seriously before they undertake such a task, under circumstances so different to those they have been accustomed to, not only the advantages that the country offers, but also the manifold obstacles they will have to conquer, the opposition they will have to contend with, and the influence of the climate against which they will have to struggle.

"One of the great difficulties, the most important, perhaps, against which the immigrants have to guard, is the extreme dampness of the atmosphere, which, under the hot, tropical sun, very soon enervates them, and renders them an easy prey to fever. If they escape this danger, they have to battle with the climate in other respects; they have to make the best of the short intervals of time when the rain does not pour from the heavens, and to adapt skillfully their knowledge of agriculture to the novel circumstances in which they find themselves, by repeated experiments on a small scale, the rules they followed in Europe being not always the best they can follow in Costa Rica, where the very fatness of the soil will not unfrequently cause them trouble."—*Letters from Costa Rica, by a British Consul.*

of some article which it is in the purchaser's sole power to give. In regard to the "valdios," the immigrant will find it next to impossible to obtain information concerning their position from the government; he must inquire of the inhabitants of the country, more especially in the districts bordering on the wilds where he wishes to purchase. When he has obtained the requisite information, he must have the lands measured and land-marks established. His application to the government must inclose a full description of the section he has chosen. This application is called "denouncing the land," the price of which is then fixed. The applicant takes possession, paying a certain amount thereon and a yearly interest of four per cent. on the remainder. There have been cases—some remaining to the present day in *statu quo*—where the purchaser (a native of influence) has been allowed to take possession, retain, and cultivate, without paying any thing more than the yearly interest of four per cent.

As already said, the soil of the state generally is of great fertility; but the immigrant must remember that while this fertility is an earnest of the wealth he may attain, it is also one of the great obstacles against which he will have to contend, for it is produced by the extreme dampness of the air and by the continuous rains, which last seven months in the settled parts of the country, and may be said to last the whole of the year in the districts which he would have to redeem from the wilderness. The natives estimate the cost of clearing and preparing the soil of a *manzana* of land (about two acres) at \$20, but an American backwoodsman would doubtless do it for one half that sum. In the upper valleys the value of land varies greatly, according to

the locality; thus, near San José, land is bought and sold at from \$100 to \$150 the manzana; if in cultivation of coffee, for instance, each tree is reckoned apart from the price of the soil—the old tree half a real (6 cents), and the young tree, just beginning to bear, one real and a half (18 cents)—while at eight or ten miles in a direction west of Barba, a manzana of land is not worth more than \$18. In the forest, the basis of the price of government lands is \$64 the *caballeria* of 120 acres. In the more favored districts, however, as, for instance, near the settlement of San Ramon, the government asks a higher price.

G U A T E M A L A.

CHAPTER XXII.

PHYSICAL FEATURES—LIMITS—POLITICAL DIVISIONS—SCENERY—RIVERS—LAKES—VOLCANOES AND VOLCANIC FEATURES—CITIES AND PRINCIPAL TOWNS.

GUATEMALA ranks first among the states of Central America in respect of population and wealth, and second only to Nicaragua in territorial extent. Its general aspect is mountainous, but a large part of the interior country consists of high plateaus, of unsurpassed beauty of scenery, of vast fertility, and unquestionable salubrity. Its greatest deficiency is the want of ports on either ocean, and the almost total absence of roads. Communication, whether by sea or land, is equally difficult and dangerous; and, from this cause, it seems probable that Guatemala will be the last to receive any great impulse or benefit from that contact with other nations which is gradually, but surely bringing the remaining Central American states within the circle of commercial and industrial activity.

On the north, Guatemala is bounded by the Mexican states of Chiapa and Yucatan, but the line of separation has never been accurately laid down; on the east, by the Bay of Honduras, the State of Honduras, from which it is divided by the high mountain range of Merendon, and by the Rio Paza, which separates it from San Salvador. On the south and west it is bounded.

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by the Pacific. In common with all the other states of Central America, except San Salvador, Guatemala is involved in territorial disputes. At the period of the independence, and for some time thereafter, the rich district of Soconusco, extending for nearly a hundred miles along the Pacific, was attached to Guatemala. Mexico, however, soon set up claims of sovereignty over it, and in 1843 forcibly occupied it. The question between the governments was, however, finally settled in 1854, through means of a convention, wherein Guatemala surrenders all her pretensions over Soconusco and Chiapa for the sum \$420,000, payable in four annual installments.

A large portion of the Atlantic coast, upward of two hundred miles in length, and of indefinite extent inland, has also been claimed by Great Britain as pertaining to the establishment of Belize. The nature and extent of this claim are fully explained in the chapters on Belize, and need not be presented here.* Considering Belize to comprise only the district defined by the treaty of 1786 with Spain, we may compute the area of Guatemala, approximatively, at 43,380 square miles. Estimating the total population at 890,000, this would give an average of 20 inhabitants to the square mile. About two thirds of the inhabitants are Indians, and the rest Ladinos and whites, the latter very insignificant in numbers. There are but few negroes. The whites are mostly proprietors of estates, where horned cattle, brought from the states of Honduras and Nicaragua, are grazed,

* The departments of Huehuetenango, Totonicapam, Quesaltenango, Chimaltenango, and one or two others, have never sympathized cordially with the capital and its dependencies. They were at one time erected by the Federal Congress as a separate state, under the name of "Los Altos," and they still retain a spirit of independence, which it requires considerable energy on the part of the central authority to repress.

fattened, and sold at a large profit. These estates also produce sugar, and the usual produce of farms in other parts of the world. Many of the whites are also engaged in trade, and are shopkeepers, and among these traders are a number of European Spaniards. Every year fresh immigrants come from Spain to join their relations here, and follow the same calling. The *Ladinos* are generally mechanics and retail shopkeepers; the Indians are the cultivators of the soil, and, in general, the agricultural laborers.*

The state is divided politically into sixteen departments, as follows :

Guatemala,	Izabal,
Sacatepequez,	Chimaltenango,
Amatitlan,	Quesaltenango,
Escuintla,	Suchitepequez,
Vera Paz,	Totonicapam,
Santa Rosa,	Solola,
Jutiapa,	San Marcos,
Chiquimula,	Huehuetenango.

These departments, collectively, send forty-four deputies to the Assembly; Guatemala sending eight, Sacatepequez five, Quesaltenango and Chiquimula four each, and all the rest two deputies each, with the exception of Vera Paz, which sends three, and Solola, San Marcos, Izabal, which send one each. The Chapter of the Cathedral, the University, the High Court of Justice, the Economical Society, and the Tribunal of Commerce, are also represented in the Assembly. They send each two deputies.

* The distinctions of race are so strongly marked that, in many of the towns and districts, there are two classes of magistrates, one for the *Ladinos*, and a second for the pure Indians. The latter are always of unmixed aboriginal blood, and are distinguished for their rigor and cruelty; so much so, indeed, that the Indians themselves have often to appeal to the Ladino magistrates for justice.

Guatemala, Vera Paz, Chiquimula, Totonicapam, and Quesaltenango are much the largest, comprising together fully one half of the total population. Totonicapam had, in 1854, 117,768 inhabitants, of whom all except about 3000 were pure Indians.

In respect of scenery and natural resources, Guatemala sustains a proud eminence. Its broad and fertile plains, its picturesque valleys, its romantic lakes, but especially its majestic mountains and numerous rivers, all vindicate its claim to be regarded as the most diversified and beautiful portion of the North American continent.* It is a country, furthermore, second neither to Peru or Mexico in its historical interest and associations. Here Alvarado found nations, not as widely diffused nor as powerful, perhaps, as the Incas or the Aztecs, but further advanced in the arts, and which had nearly attained, if they had not actually reached, that advanced point of human development, a written language. The Quichés, the Zutugils, and the Kachiquels, the three great affiliated aboriginal nations of Guatemala, may be taken as the types and best exponents of that race which sent its colonies into Yucatan, and, under the name of Tulhuatecas or Toltecs, carried the elements of civilization into Mexico. The evidences of their advancement in the arts remain to us in the ruins of Palenque, Olosingo, Utlatan, and in the numerous ruined cities and deserted temples which abound in the forests of Yucatan.

* A recent traveler has drawn the following truthful contrast between the scenery of Mexico and Central America :

“The mountains of Mexico are massive, grand, of wide-spreading base, endless *plateaus*, and long slopes of ascent and descent, whereas those of Central America, and particularly those of Guatemala, are marked by sudden chasms, fathomless rents, capricious peaks, a scattered, unconnected, and varied chaos of height and depth, bearing the unmistakable aspect of having been caused by the most violent and sudden paroxysms of volcanic action.”

Here, as in Nicaragua and Honduras, the principal streams flow eastward or northward into the Bay of Honduras or the Gulf of Mexico. The largest, and in many respects the most interesting, is the great river Usumasinta, which, under the names of Lacandon, de la Pasion, etc., drains nearly half of the state, and, collecting the waters of a thousand tributaries, pours them through a dozen mouths into the Bay of Campeachy and the Laguna de Terminos. For a great part of its course it flows through an untracked wilderness, occupied only by the Lacandones, Manches, and other unconquered Indian tribes, within whose territories no one dares to venture. At present, therefore, with the exception of that part which flows through Tabasco, it is unavailable for purposes of navigation; indeed, its capacities in this respect remain to be disclosed by future explorations. It was ascended in 1847 by M. Arthur Morelet as far as Tenosique, a distance, following the windings of the stream, of more than two hundred miles from the sea. He describes it as a noble stream, flowing through a region of remarkable beauty and productiveness. It is upon the banks of a tributary of the Usumasinta, the Chacomel, that the ruins of Palenque are situated. Where it enters the Usumasinta the latter is six hundred yards broad.

The Rio Motagua, next to the Usumasinta in size, interlocking its sources with those of the latter, rises within ninety miles of the Pacific, and flows in a very direct course, a little north of east, into the Bay of Honduras, near the port of Santo Tomas. Its total length is not less than three hundred and fifty miles. Shut in by parallel ranges of mountains, it has a comparatively narrow valley, often a mere gorge, and receives but few, and those comparatively small tributa-

ries. It is therefore a long rather than a large stream. It is navigable for small canoes from its mouth to Chico-Sapote, a distance of nearly two hundred miles, and for *bongos*, or small barges, to Gualan, a distance of one hundred and twenty miles. Above Chico-Sapote it is a simple torrent, winding among steep mountains, and descending by a succession of rapids and falls, filled with immense rocks and the trunks of fallen trees. From Chico-Sapote to Gualan the course of the river is tortuous, and for the first thirty miles closely shut in by abrupt mountains. For the remaining distance the mountains are found only on the left bank, while a fertile plain, varying in width from half a mile to a mile, spreads out on the right. Within this distance, nevertheless, there are many rapids, some extremely difficult, and with only from eight to twelve inches of water. Below Gualan the river attains a width of from two hundred to three hundred feet, with a minimum depth of three feet, and winds through a greatly enlarged valley, between densely wooded banks from sixteen to twenty feet in height, until within six leagues of the sea, where it forms a delta, entering the ocean by a number of mouths, obstructed by dangerous and almost impassable bars. Within a few years it has effected a junction with a small but deep stream, the Cuyamel or Tinto, which enters the sea some miles to the eastward. As this stream has ten feet of water on the bar at its mouth, it may be found to afford increased facilities for entering the Motagua. It is upon the right bank of the Motagua, about eighty miles above its mouth, that the considerable ruins known as those of Quirigua are found. The more extensive and better-known monuments of Copan exist in Honduras, on a stream of the same name, a tributary of the Motagua.

The River Polochic, to the northward of the Motagua, is a large and beautiful stream. It takes its rise in the high plateau of Salama, and traverses the southern districts of Vera Paz, receiving the large tributary Rio Cajabon, and falling into the lake or gulf of Dulce. It has a length of about one hundred and fifty miles, and may be ascended by canoes for eighty miles. For this distance it is from two hundred to two hundred and fifty feet broad, with a minimum depth of five feet. It has a bar with very little water at its mouth, and the adjacent country, for some leagues inland, is overflowed during the rainy season. It was on the banks of this river that an English company in 1839 attempted, unsuccessfully, to found a colony.

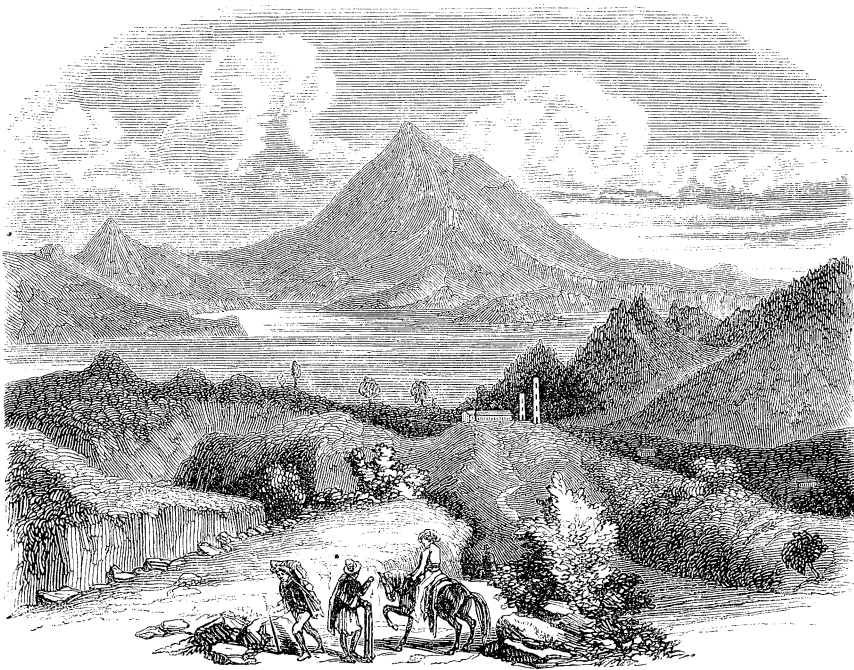
The rivers falling into the Pacific are few and small. The largest is the Rio Michatoyat, the outlet of the Lake of Amatitlan, at the mouth of which are the roadsteads of Istapa and San José. It has a rapid course of seventy miles, for the most part through unbroken forests. The body of water which flows through it is large, but its descent is rapid and greatly obstructed with rocks, so as to prevent navigation, even by canoes, except for a few miles near its mouth. It has two fine falls, one near the village of San Pedro Martyr, and another, much greater, a short distance below that point. The river is here divided into four channels by immense granitic rocks, between which the water rushes wildly over a precipice two hundred feet in height. It is pronounced by those who have seen it to be one of the finest cataracts in the world. The Rio de los Esclavos enters the sea about thirty miles below the mouth of the Michatoyat. Mr. Stephens describes it as "a wild and noble river," spanned by a stone bridge, regarded as the most important work of

the kind in Central America. The Rio Paz, Pazaca, or Aguachapa, constituting the boundary between Guatemala and San Salvador, is of about the same size with the Rio de los Esclavos, and, like that, has an exceedingly rapid current, interrupted by rocks, over which the waters pour violently during the rainy season, often preventing travel for days and weeks together. In short, none of the rivers of Guatemala on the Pacific coast are available for navigation, nor is it likely they can be made useful, except for driving mills or for irrigation.

The Lake of Amatitlan, six leagues distant from the capital, at the bottom of the valley of the same name, is about eighteen miles long by two broad, and, in common with the lakes of Atitlan, Ilopango, and Masaya, seems to owe its origin to great volcanic disruptions. Its depth is very great, and in parts, it is alleged, it can not be sounded. Boiling springs pour into the lake from every side, and the temperature of the water is always higher than that of the atmosphere. Mr. Dunlop states that he found it at 93° of Fahrenheit, while the average temperature of the air for the twenty-four hours preceding had been 79°. But, notwithstanding the high temperature and brackishness of the water, the lake abounds in *mojarras*, a delicate fish, about a foot in length, together with *pepescas* and *pescaditos*, which are supplied in considerable quantities to the capital. The shore of the lake is lined with pumice, and the strata of the rocks composing the surrounding mountains seem to have been cut off abruptly; altogether the valley of the lake appears to have been at one time a great volcanic vent or crater. The soil is made up almost entirely of volcanic matter, and the water in all the wells is brackish. Mr. Dunlop

states that in digging a well at an elevated point called Rincon, the site of most of the cochineal plantations, the heat of the earth increased so rapidly as to become intense at the depth of ten yards. At a depth of thirty yards water was found, but boiling. In the lower grounds, near the lake, the hot water is reached at a depth of from three to six feet.*

The Lake of Atitlan, in the department of Solola, is about thirty miles long by from ten to fifteen broad.



LAKE OF ATITLAN.

It is remarkable for its great depth (said to exceed 1800 feet), and for the grandeur of its surrounding scenery. It is shut in by dark, precipitous, volcanic rocks, which encircle it as with a wall. Like the Lake of Masaya,

* Dunlop's Travels in Central America, p. 121.

it has no visible outlet, although it receives several considerable mountain streams. It is first visible to the traveler from the high, cool plains of Quesaltenango, three or four thousand feet above the level of its waters. "From this elevation," says Mr. Stephens, "we looked down upon its surface, shining like a sheet of molten silver, inclosed by rocks and mountains of every form, some barren and some covered with verdure, rising from five hundred to five thousand feet in height. Opposite, down on the borders of the lake, and apparently inaccessible by land, was the town of Santiago Atitlan, between two immense volcanoes from eight to ten thousand feet in height. Further on was another volcano, and still beyond another, loftier than all, with its summit buried in clouds." Along the slopes leading down to the lake the temperature became hotter with every step of descent, until the traveler finds himself lost in the luxuriance of tropical verdure. Mr. Stephens found several hot springs on the shore at the edge of the lake, and proved by actual experiment that the traditionary story of the coldness of its waters is unfounded. It has only a single variety of fish, diminutive in size, and a variety of crab, but both in abundance.

The Lake of Izabal, or, as it is oftenest called, the Gulf of Dulce, is probably the largest body of fresh water in the state. It lies close to the Bay of Honduras, and is thirty miles long by about twelve broad. It seems to be formed by a widening out, over a considerable valley, of the waters of the Rio Polochoc. Between the gulf and the sea is a smaller lake, fifteen miles long by three broad, called La Golfete, or little gulf. The waters from both reach the ocean through a narrow but most picturesque stream or strait, called La Angos-

tura, or Rio Dulce. Mr. Stephens has left us an animated account of his passage through this strait, and his arrival at Izabal. Going from Belize in a small steamer, after passing through the Bay of Honduras, the bow of the vessel was turned toward the shore, which appeared to be only a mass of impenetrable mountains. Finally,

“A narrow opening in a rampart of mountain wooed us on, and in a few moments we entered the Rio Dulce. On each side, rising perpendicularly from 300 to 400 feet, was a wall of living green. Trees grew from the water’s edge, with dense, unbroken foliage, to the top; not a spot of barrenness was to be seen; and on both sides, from the tops of the highest trees, long tendrils descended to the water, as if to drink and carry life to the trunks that bore them. It was, as its name imports, a Rio Dulce, a fairy scene of Titian land, combining exquisite beauty with colossal grandeur. As we advanced the passage turned, and in a few minutes we lost sight of the sea, and were inclosed on all sides by a forest wall; but the river, although showing us no passage, still invited us onward. Could this be the portal to a land of volcanoes and earthquakes, torn and distracted by civil war? For some time we looked in vain for a single barren spot. At length we saw a naked wall of perpendicular rock; but out of the crevices, and apparently out of the rock itself, grew shrubs and trees. Sometimes we were so inclosed that it seemed as if the boat must drive in among the trees. Occasionally, in an angle of the turns, the wall sunk, and the sun struck in with scorching force, but in a moment we were again in the deepest shade. From the fanciful accounts we had heard, we expected to see monkeys gamboling among the trees, and parrots flying over our heads, but all was as quiet as if man had never been there before. The pelican, the stillest of birds, was the only living thing we saw, and the only sound was the unnatural bluster of our steam-engine. The wild defile that leads to the excavated city of Petra is not more noiseless or more extraordinary, but strangely contrasting in its sterile desolation, while here all is luxuriant, romantic, and beautiful.

“For nine miles the passage continued thus one scene of un-

varying beauty, when suddenly the narrow river expanded into a large lake, encompassed by mountains and studded with islands, which the setting sun illuminated with gorgeous splendor. We remained on deck until a late hour, and awoke the next morning in the harbor of Izabal. A single schooner, of about forty tons, showed the low state of her commerce. We landed before seven o'clock in the morning, and even then it was hot. There were no idlers on the bank, and the custom-house officer was the only person to receive us."

There is a bar at the mouth of the Rio Dulce, which prevents the entrance of vessels drawing more than six feet of water. The depth of the river generally, and of the Golfete, is from twelve to fifteen feet; that of the gulf proper from three to five fathoms, shoaling gently. Upon the south bank of the gulf is situated the little, unhealthy port of Izabal. As it can not be reached by sea-going ships, its commerce is carried on through Belize, by means of small vessels capable of crossing the bar and ascending the river.*

The Lake of Itza, or Peten, in the unexplored department of Vera Paz, is far the most interesting body of water in the state, but, as it will claim notice in another connection, it is unnecessary to go into details respecting it here.

The volcanic features of Central America, to which I have so often had occasion to allude in the foregoing chapters, are, if possible, more distinctly marked in Guatemala than in any of the other states. At any rate, the great volcanoes of Fuego and de Agua, which

* The village of Livingston (so called from the framer of the Louisiana code, which was at one time adopted by the Republic of Central America) is situated at the mouth of Rio Dulce. It has about seventy huts, and a population of four hundred and fifty, chiefly Caribs, from Omoa and Truxillo, expelled from those points for their participation in Spanish intrigues for regaining possession of the country. The men are principally engaged in the mahogany works at Belize, and the women in cultivating the soil.

dominate the city of Guatemala, have been oftener described, and are better known than the others. Besides these there are several, scarcely less imposing, which merit equal attention. That of Panajachel, or Atitlan, situated near the lake of the same name, is remarkable for the frequency and violence of its eruptions, the last of which took place in 1828 and 1833. On both occasions it emitted vast quantities of stones and ashes, covering the coast of Suchitepequez for many leagues, and utterly destroying all animal and vegetable life. Its explosions were terrific, accompanied by violent shocks of earthquakes, which leveled every building in its neighborhood, and detached immense masses of rock from the neighboring mountains. The whole surrounding country, for a distance of thirty miles, was for fifty hours buried in profound darkness. Near Amatitlan there is a cluster of three volcanoes, called volcanoes of Apacaga, from a small village of that name not far distant. They are called respectively "Volcan de Agua" (water), "Las Cinezas" (cinders), and "De Tormentos" (tempests or thunders). The last named is the highest, and derives its name from being nearly always covered with heavy clouds of black smoke, through which gleams of fire may be seen at night. Its summit is rarely visible, and frequent loud reports, like peals of thunder, proceed from it. Mr. Dunlop ascended it in 1846.

"We commenced the ascent from Apacaga, amid broken and charred rocks, intermixed with cinders and lava. After two hours' hard toil, we approached the part of the mountain which is covered with smoke, when the discordant noises heard below became loud and terrific, while the ground shook as with one continued earthquake. Suddenly we were enveloped in a volume of smoke, and a cloud of ashes fell around us. Pressing forward among the cinders, which in places were so hot as to burn my shoes, and guiding myself by the flashes of flame which

seemed to play about the summit, I proceeded in the direction of the loudest noises. At last, a lurid glare penetrating through the volume of smoke, and the increased vividness of the flashes of flame, accompanied with a sound like that of the roaring of an immense furnace, convinced me that I was approaching the crater of the volcano. I struggled slowly to approach it, but, feeling much exhausted, sat down on a rock to recover my strength. I was almost immediately aroused by a tremendous explosion, louder than any thunder I had ever heard, and a vast, lurid flame rose from the crater, the intense light of which seemed to penetrate the smoke and illuminate the surrounding country. The ground seemed to sink below me, and I was thrown violently among the ashes, where, for a time, I lay half senseless, stunned with the noise and blinded with the light. When I recovered my composure, I heard the smothered roar of the crater close by; the rocking of the ground had ceased, and the eruption seemed to have exhausted its force. Meantime the night had come on, and here and there a star appeared through the hot vapor and drifting smoke. I sat still for some time, bewildered, looking at the red glare of the crater, which appeared like the chimney of a huge furnace. I attempted to approach its edge, but the heat and suffocating vapors prevented my reaching within twenty or thirty yards. Aware that it would be impossible for me to descend the precipitous sides of the mountain during the night, I waited for the dawn, when, after a brisk descent of two hours, I reached the rugged plain at the foot of the Mountain of Thunders.

“This mountain, although perpetually burning, has not had any destructive eruption since 1776, when it vomited forth an immense mass of lava and cinders, entirely destroying the village of Tres Rios, about nine miles distant, and filling up the three rivers from which it took its name. The mass of lava which flowed down its sides in many places is more than a hundred feet thick, and it still looks as bright and fresh as if only newly cooled. Las Cinezas still emits a little smoke occasionally, but there seems to be no tradition of its eruption. It is conical in form, composed of black cinders, without a trace of vegetation on its surface. It is not high, probably not elevated

over 1000 feet above the general level, while Los Tormentos must be from 4000 to 5000 feet in height. The Volcan de Agua, like its namesake near old Guatemala, does not, as might be supposed, emit water. That volumes of water do occasionally descend its sides is not improbable. But this may be accounted for by supposing an extinct crater filled with water by the heavy rains, which, breaking through the scoriaceous sides, has descended in desolating torrents over the adjacent country. Such a flow of water took place about a century ago, but caused no damage beyond sweeping away a few Indian huts. The sides of Las Cincizas afford abundant evidences that such overflows have several times occurred, appearing as if a mighty river had been poured from the crater."

The most celebrated volcanoes of Guatemala, however, are those of Agua and Fuego (water and fire), near the city of Antigua Guatemala. The former is a perfect cone in outline, clothed with perpetual verdure to its summit. It derives its name from an eruption or flow of water, which took place very soon after the Conquest, in the year 1541, and which destroyed the original city of Guatemala, and buried Doña Beatrice de la Cueva, the remarkable wife of Pedro de Alvarado, the Conqueror, beneath its ruins. Mr. Leigh Page, who ascended this volcano in 1834, has left us a record of the adventure, from which the subjoined account is abridged:

"At one o'clock P. M. on the 25th of August we set out from Ciudad Vieja for the summit of the Volcan de Agua. At three o'clock we reached the village of Sta. Maria, beyond which we traversed a district studded with trees and covered with luxuriant grass, among which the native single dahlia was conspicuous. The path gradually became contracted and steep until we reached a part of the mountain called La Cruz, from a large cross erected there. Here we were obliged to leave our mules and proceed on foot by torchlight, scrambling through rank grass

and dense undergrowth with great difficulty and fatigue. We encamped for the night by the side of a blazing fire. Early the next morning we resumed our ascent, entering the region of pines, noble trees swaying their branches with a solemn sound to the impulses of the winds. At sunrise we saw a vast sea of clouds floating beneath us. At seven o'clock we reached the summit, and gladly descended into the crater, to escape the cold and cutting winds which swept around us. This crater is a hollow space from forty to fifty yards deep, and about a hundred and fifty in diameter. The sides and bottom are strewn with masses of rock, which show the effect of boiling water or of fire, the spaces between them being filled with bushes and trees. After breakfast we climbed to the highest peak of the mountain, from which we obtained a glorious view in every direction, embracing in its range the cities of Old and New Guatemala, the Lake of Amatitlan, the Department of Suchitepequez, and the range of volcanoes stretching away to the borders of Chiapa. To the north and east we saw the mountains of Vera Paz and Belize, and the rich State of San Salvador, while one hundred and forty miles to the northeast could be discerned the waters of the Atlantic, those of the Pacific appearing almost at our feet, although ninety miles distant. While contemplating the view, we were surprised by the appearance of two large wild oxen, which the Indians, by shouting, tried to frighten over into the crater. We saluted them with our pistol balls, but they nevertheless escaped. Leaving an inscription to commemorate our visit, we began our descent, each one with a cord around his waist, held by an Indian in front and another behind. After descending a certain distance, flowers began to bloom on every side. I recognized the dahlia, the lupin, and a species of large poppy. We also gathered some fine strawberries."

The Indians of the little town of Santa Maria, on the flank of this volcano, derive a small profit from collecting the hoar-frost or snow which settles on the summit, which they envelop in dry grass and carry to the city of Guatemala for sale.

To the westward of the Volcan de Agua, and wholly

disconnected from it, is the Volcan del Fuego, a mountain of vast bulk and great height, which sends out smoke and ashes continually. Sometimes flame rises from its centre, and fearful rumblings are heard within its depths. Its summit is covered with ashes and scorïæ, and has never been reached by human foot.* Distant about eight leagues from the volcanoes just described is the Volcano of Pacaya, somewhat less imposing in size, and apparently of later formation. It still exhibits signs of activity, although covered to the summit with fine timber.

The following table, reduced from the observations of Captain De Lepelin, of the French navy, gives the latitudes, longitudes, and elevations of the principal volcanoes above noticed :

	Latitude.	Longitude.	Elevation.
Volcan de Agua . . .	14° 32′	91° 30′	14,507 feet.
“ “ Fuego . .	14° 33′	91° 9′	13,930 “
“ “ Atitlan .	14° 36′	91° 17′	11,510 “
“ “ Pacaya . .	14° 25′	90° 51′	7,100 “

The present capital of Guatemala, called Nueva or New Guatemala, is the third of the name, and was founded in 1776, three years after the almost total destruction of *Antigua Guatemala* in 1773, which city itself succeeded to that founded by Alvarado, on the plain of Almolonga, at the foot of the Volcan de Agua, the ruins of which are known as *Ciudad Vieja*, or Old City.† It is situated in the tierra templada, or temper-

* On the 17th of September, 1857, the Volcan de Fuego broke out into an active state of eruption, which continued for some days. A great quantity of lava was ejected, but, as far as is yet known, no injury was done to the towns and plantations in the neighborhood beyond a certain amount of damage to the crop of cochineal.

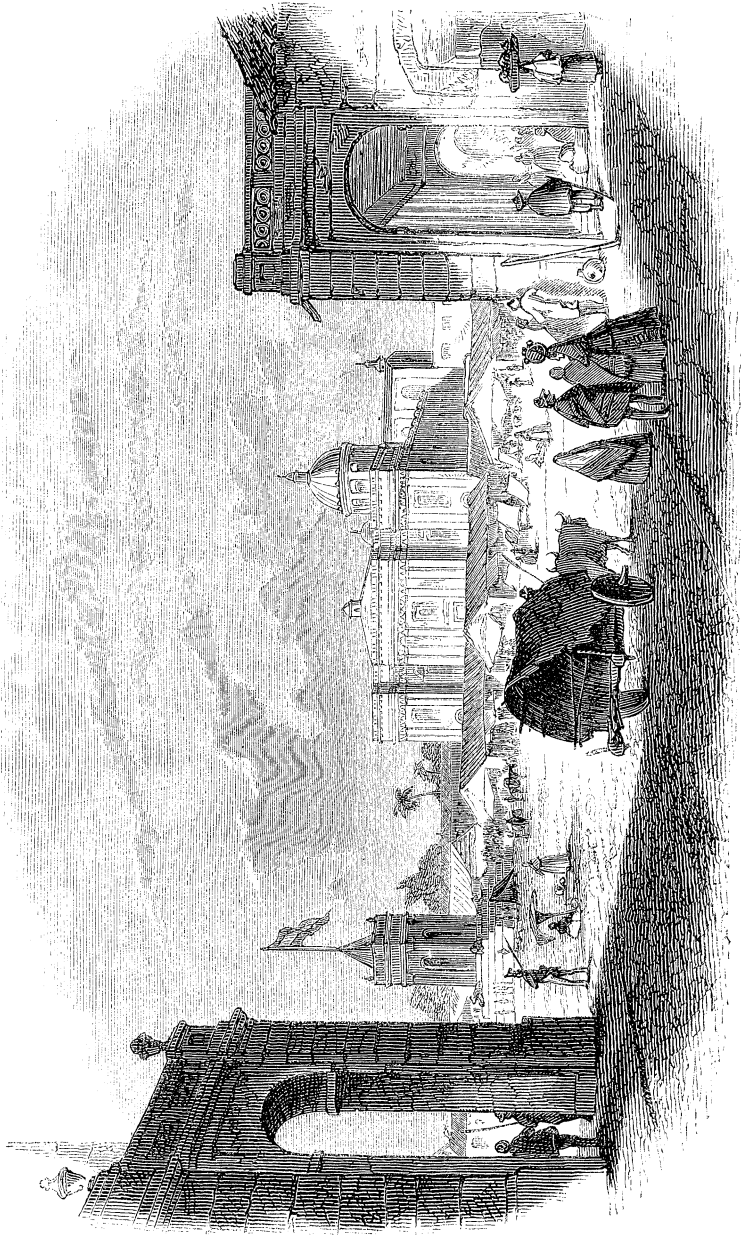
† The ancient capital, founded by Alvarado, was destroyed in 1541 by a great flood of water precipitated from the Volcan de Agua during a severe earthquake. It has generally been assumed that the flow of water was a real eruption, but there is abundant reason for believing that the water flowed from the

ate belt of country, 4372 feet above the level of the sea, at the northern extremity of a vast and beautiful plain, in lat. $14^{\circ} 35' N.$, and long. $90^{\circ} 45' W.$ of Greenwich. Its position is equally salubrious and lovely, the thermometer rarely rising above 80° of Fahr., and never reaching the freezing point. The mean average for the year is about 65° , a temperature which may be described as that of eternal spring. Mr. Stephens describes his approach to the city as follows:

“Late in the afternoon, as I ascended a small eminence, two immense volcanoes stood before me, seeming to scorn the earth, and towering to the heavens. They were the great volcanoes of Agua and Fuego, forty miles distant, and nearly 15,000 feet high, wonderfully grand and beautiful. In a few minutes the great plain of Guatemala appeared in view, surrounded by mountains, and in the centre of it the city, a mere speck on the vast expanse, with churches and convents, and numerous turrets, cupolas, and steeples, and still as if the spirit of peace rested on it, with no storied associations, but by its own beauty creating an impression on the mind of the traveler which can never be effaced. I dismounted and tied up my mule. As yet the sun lighted up the domes of the city, giving a reflection so dazzling that I could only look at them by stealth. By degrees its disk touched the Volcan de Agua; slowly the whole orb sank behind it, illuminating the background with an atmosphere fiery red. A rich golden cloud rolled up its side and rested on its top, and while I gazed the golden hues disappeared, and the glory of the scene was gone.”

But beyond its fine climate, and the beautiful prospect which it commands, Nueva Guatemala possesses few advantages of a substantial character. The neighboring country, although not sterile, is deficient in wa-

accumulations of rain and snow in the extinct crater, the walls of which were broken through by the pressure or disrupted by the earthquake. It was from this circumstance that the volcano derives its name. It was called by the aborigines *Hunap-hu*.



NUEVA GUATEMALA—THE GRAND PLAZA.

ter, which, for the use of the city, requires to be brought from a distance of fifteen miles, through an aqueduct sustained on a great number of arches. But, as the supply of water is not sufficient for irrigation, the plain, for a great part of the year, is parched and dry, so that most of the fruits and vegetables for the use of the city have to be brought from the neighborhood of Antigua Guatemala, thirty miles distant. It is also disadvantageously situated for commerce, being two hundred and twenty miles distant from Izabal, the nearest Atlantic port, and ninety miles distant from San José, the only port or roadstead of the state on the Pacific. It is laid out in a quadrilateral form, with the sides facing the cardinal points; the extreme length is little less than a mile, with an equal breadth; the streets are in correct alignment, crossing each other at right angles, each being about forty feet broad. According to Mr. Baily,

“The great *plaza* is nearly in the centre of the town, and is 150 yards square. The east side is occupied by the Cathedral, the buildings appertaining to the ecclesiastical authorities, and the archiepiscopal palace. On the west side stand the government house, ministerial offices, and other establishments of the executive authorities, having the Mint in the rear. On the north, the Cabildo, or Town Hall, municipal offices, and the prison. On the south there is a range of shops. Three sides are fronted by a colonnade of square pillars and arches, but the eastern side is open: in the middle stands a fountain, or rather stone basin, of good proportions, with a permanent supply of water. The Cathedral is a neat, substantial edifice; the façade handsome, without aspiring to architectural grandeur; the interior, with its nave and aisles in a very chaste style, is lofty, well-proportioned, and not too much loaded with ornament; the great altar is in good taste and elegant, having behind it an excellent organ, constructed by a native artist. The other buildings on this side are more remarkable for their simplicity and

plainness than elaborate design. The porticoes, owing to their moderate elevation, with only an unadorned parapet over them, present nothing to excite the admiration of a stranger; yet the appearance of the square is sufficiently imposing, and would become much more so were it not obstructed by several ranges of low wooden tenements immediately in front of the Cathedral, and extending half way across the place, much diminishing the good effect of the whole. The daily market for fruit, vegetables, and small wares of all descriptions being held here, these excrescences are tenanted by retail dealers, and the rent of them giving a considerable revenue to the municipal funds, it is not probable they will be transferred to another spot, although there are situations that would be quite as suitable for them. Besides the principal square there are several others, each with its central basin constantly supplied with water, but none presenting any thing calling for particular notice. There are, in all, twenty-four churches, some of them good and massive buildings, internally much adorned, though not distinguished by superior specimens of the fine arts: they possess no paintings of the old masters, who were, and are, most worthily the pride of Spain. Considering the former wealth of this country, and the means it had of acquiring some of these productions, it seems rather surprising that they were not sought for to decorate the temples of divine worship. The private houses are substantially constructed, but, to guard against the repetition of former disasters, they are kept low, none being of more than one story. Some are very spacious, having two or more quadrangular courts in the interior, around which runs a corridor, affording shade and protection from rain in the wet season, and from the sun at all times; besides which, many of them have gardens for the cultivation of flowers and fruit-trees, though rarely well attended to. On each side of the courts are distributed the principal and secondary rooms, communicating with each other on the inside, forming altogether commodious dwellings, well ventilated and adapted to the climate. The first-rate houses occupy a greater extent of ground than those of a similar class in the cities of Europe; but the plan and distribution in all, being peculiarly Spanish, does not furnish many conveniences, nor afford much opportunity for the

display of European elegance. The mildness of the climate makes contrivances for the diffusion of artificial heat in the apartments unnecessary; fire-places and chimneys are unknown; but doors and windows being lamentably ill adjusted, an improvement in them, to repel a current of air occasionally, is quite desirable. Every division of the city is profusely supplied with excellent water, which, for reasons before assigned, is brought from a distance of some leagues by two aqueducts; one on the southeast, of good construction, passing for several hundred yards over a range of lofty arches; the other, on the southwest, bringing from two distinct ranges of hills copious streams of water, by which convenience, cleanliness, and healthiness are well consulted; indeed, there are few large towns wherein these important particulars have been better attended to. All the streets are paved, many of the leading thoroughfares having a broad path of flag-stones on each side for foot passengers. Among the public buildings may be enumerated the University of San Carlos, the Tridentine College, the Hospital of San Juan de Dios, having contiguous to it the general cemetery (interment in the churches or within the precincts of the city being prohibited), four public lavaderos or washing-places, a circus wherein bull-fights and equitations are occasionally exhibited: at a short distance on the southward is a public slaughter-house, where all cattle for the general supply must be killed. A respectable theatre has not yet been erected, neither have walks or places for public recreation been appropriately laid out. Dramatic performances are sometimes given, but in places destitute of the requisites for such representations; consequently, this species of amusement does not find the encouragement it is entitled to, and would have under proper management, among a people fond of attending shows and processions. The population of the city and suburbs can not be estimated at more than 40,000; probably it is rather below this number.”*

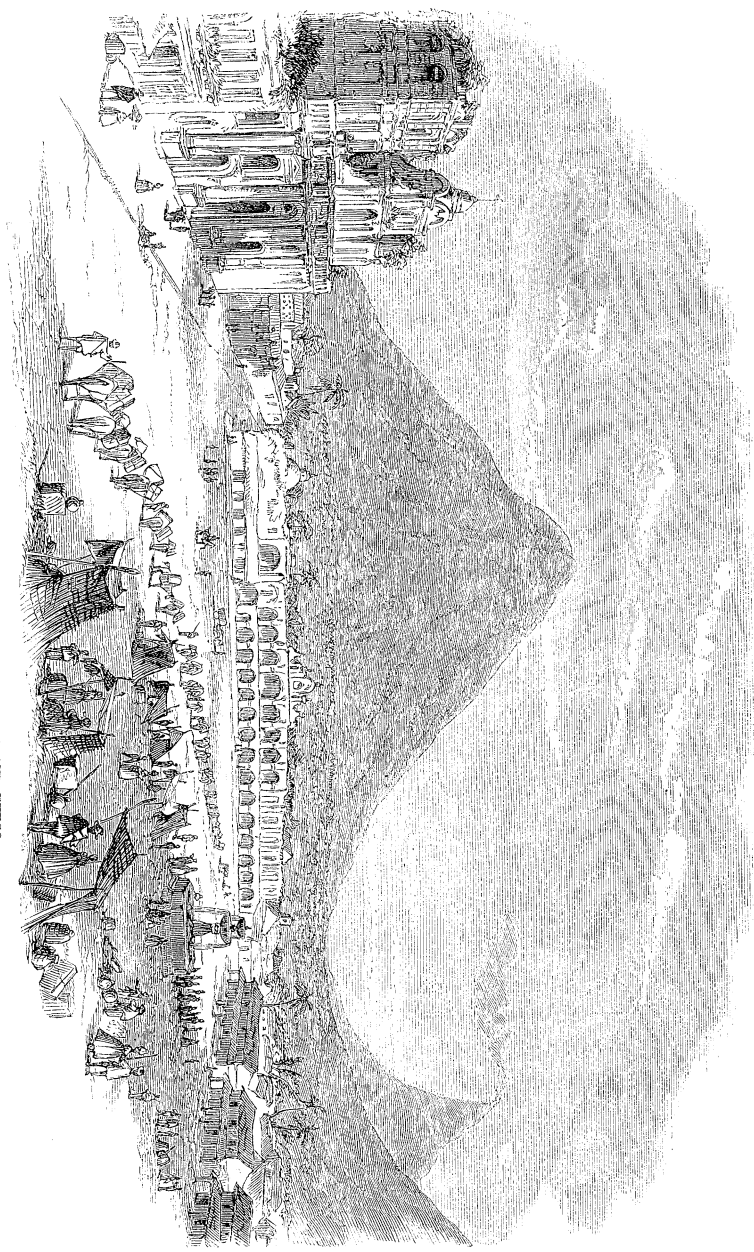
Dunlop mentions that there is a college in Guatemala, that of San Carlos, which attained some celebrity under the crown, but which, he affirms, “is not equal to

* Baily's “Central America,” p. 33.

a second-rate school in Europe." The president for life, Carrera, has just completed a fort commanding the town, which mounts a few pieces of cannon, and is called "El Castillo." It is, however, itself commanded by surrounding eminences, and could only have been designed to keep the city in awe. A fine cemetery has been established near the town, in which there is a piece of ground for the burial of strangers, or persons not of the established religion. There is also a hospital, that of San Juan de Dios, which can receive 200 patients. In the year 1853 not less than 4064 persons were received, of which 3613 were discharged cured, and 421 died. The cost of the establishment for this year was \$19,352.

Old or Antigua Guatemala, 30 miles to the westward of the capital, is still a place of considerable importance. Previous to its abandonment, in 1776, it was a magnificent town, second only to Mexico among the cities of Spanish America. It stands in the centre of the valley or plain which lies between the volcanoes of Agua and Fuego, having, according to the Spanish saying, "Paradise on one hand, and Hell on the other." The beauty of its position, the richness of the adjacent country, and the grandeur of its surrounding scenery, have elicited the highest expressions of admiration from travelers. Mr. Stephens describes it as standing in a delightful valley, shut in by mountains and hills that always retain their verdure, watered by two rivers that supply numerous fountains, with a climate in which neither heat nor cold predominates, and altogether surrounded by more natural beauty than any location he had ever seen in the whole course of his travels. Crossing one of the streams which flows past the city, bearing the poetical name of El Rio Pensativo, he entered the city.

"On each side were the ruins of churches, convents, and pri-



ANTIGUA GUATEMALA.—VOLCANOES DE AGUA AND PUECO.

vate residences, large and costly, some with fronts still standing, richly ornamented with stucco, cracked and yawning, roofless, without doors or windows, and trees growing inside above the walls. Many of the houses have been repaired, the city is re-peopled, and presents a strange appearance of ruin and recovery. The inhabitants, like the dwellers over the buried Herculaneum, seemed to entertain no fears of renewed disaster. In the centre of the town is a grand square, and from it the spectator enjoys a prospect, the beauty of which it is impossible to convey in words. The great volcanoes of Agua and Fuego look down upon it; in the centre is a noble stone fountain, and the buildings which face it, especially the old palace of the captain general, displaying on its front the armorial bearings granted by the Emperor Charles the Fifth to the loyal and noble city, and surmounted by the Apostle St. James on horseback, armed and brandishing a sword; and the majestic but roofless and ruined Cathedral, three hundred feet long, one hundred and twenty feet broad, nearly seventy feet high, and lighted by fifty windows, show at this day that La Antigua was once one of the finest cities of the New World, well deserving the proud name given by Alvarado, the City of St. James of Gentlemen (Santiago de los Caballeros)."

The population of La Antigua was anciently upward of 60,000, and it had 100 churches and 20 monasteries. It is estimated that it now contains 20,000 inhabitants. It has derived a considerable impulse, both in population and wealth, from the production of cochineal, the cultivation of which was successfully introduced in its vicinity thirty years ago. Most of the cochineal lands belong to the municipality, and are let on leases of nine years duration. This is the ordinary duration of a cochineal plantation, as, at the end of that time, the nopal becomes exhausted and must be replenished.

Amatitlan has lately become a town of considerable importance, also, from the introduction of cochineal cultivation. In 1830 it had scarcely 3000 inhabitants; it

now numbers upward of 15,000, and probably possesses more evidences of growing wealth and prosperity than any town in the state. It is situated at the lower end of the volcanic valley elsewhere described, and considerably below the level of the volcanic lake of the same name which occupies the superior portion of the valley. It has altogether a modern aspect, and, although it has no distinguishing public edifices, yet its streets have names, the houses numbers, and there are lamps in the squares. During certain months of the year it is a place of considerable resort for the purpose of bathing in the lake, the waters of which are supposed to possess certain curative qualities.

Quesaltenango, which was the capital of Los Altos, is the second town of the state in importance, and contains a population of about 25,000 inhabitants. It stands on a high plateau at the foot of a grand range of mountains, which is crowned by a great volcano constantly sending out smoke. Between this volcano and the city is a vast ridge of lava, which, if it had taken the direction of the town, would have involved it in the fate of Herculaneum. It is regularly laid out and substantially built. The great church is an imposing building, with a highly decorated front. The interior is lofty, two hundred and fifty feet long, and loaded with ornaments in sculpture and painting. The *cabildo*, or house of the municipality, is also a large and imposing edifice. The inhabitants are chiefly Indians, and among them many families descended from the Quiché chiefs, who zealously preserve their family names, and who constitute an aristocracy held in the highest respect by the lower orders of their nation. The district of which Quesaltenango is the centre is high and cold, and its principal products are wheat

and wool, the former of which supplies the less elevated and warmer districts, while the latter is manufactured into a kind of *serga*, or coarse cloth, and sent all over Central America, and even to Chili and Peru.

The town of Esquipulas, in the Department of Chiquimula, derives its importance, not from its population, which is small (1800), but from its sanctity, and the reputation of a great fair which is held there annually, commencing on the 15th of January, and lasting for three days. This fair calls together thousands of people, many of whom come from the remote parts of Mexico and South America, attracted by the fame of our Lord of Esquipulas (Nuestro Señor de Esquipulas). According to Mr. Stephens, eighty thousand pilgrims are known to have been gathered here on a single occasion. The church is of large size, commanding in position, and contains a figure of the Crucifixion, which has a reputation for working miracles not inferior to "Nuestra Señora de Guadalupe," or her of Loretto. This figure stands in a rich shrine of silver, and the devotees are obliged to ascend the steps of the church on their knees, or bearing a heavy cross, and thus approach the figure, and kiss the pedestal on which it stands; but he can not touch the sacred image. This done, he pays a fee, and receives a piece of ribbon stamped with the words "Dulce nombre de Jesus"—Sweet name of Jesus! Great numbers of blind, and halt, and deaf, and paralytic are reputed to have been cured here, and to have returned rejoicing to their homes.*

There are many other large towns in Guatemala

* I had a servant in Honduras, an able-bodied and active fellow. On the first of January he demanded his discharge, in order to go to Esquipulas. "But why do you go?" I asked; "are you not well?" "Perfectly, Señor," he replied; "but I go every year. I am one of the paralytics; and when I get cured I have a jolly time. Besides, Señor, it pays."

which merit description, but which it is impossible to notice here. Among these I may enumerate the towns of Totonicapam, with 15,000 inhabitants; Salama (5000); Coban (14,000); Gualan (4000); Rabinal (6500); Cubulco (4000); Cajabon (4000); Chiquimula (6000); Esquintla (6000); Zacapa (5000), etc., etc.

The ports of Guatemala, on the Atlantic, are Izabal, in the Gulf of Dulce, and Santo Tomas, near the mouth of the Motagua. On the Pacific it has only two bad roadsteads, Istapa or Istapam, and San José. Istapa was first used by Alvarado at the time of the Conquest, and he built here the vessels in which he subsequently sailed for Peru. From that period until 1853 it remained the only port of Guatemala on that side of the continent. In that year, however, it was abandoned, and formally closed to commerce, for a point called San José, twelve miles to the northward, which, it was supposed, suffered under fewer disadvantages.* Both Is-

* "San José lies in lat. $13^{\circ} 56'$ N., and long. $90^{\circ} 42'$ W. When vessels are lying at anchor, the double-peaked volcano of Antigua Guatemala bears N. by W. half W., and the volcano de Fuego N. half E.

"No better denomination can be given to it than that of an open roadstead, and one of a very bad description. The coast is very clear, and the parallel runs E. to W. The anchorage is about three quarters of a mile from the shore, in eleven to fifteen fathoms of water; the soundings of loose sand, so that it is not uncommon for vessels to drag their anchors. The swell breaking on the shore is very strong at some fifty fathoms from the beach, for which it is necessary to use a girt-line for landing and leaving the shore, choosing the period for so doing before ebb tide, because at flood tide the surf breaks over the beach and fills the boat with water. The currents are very strong, and vary with each change of the moon, the variations sometimes taking place within the short space of six hours. From November to February, during the prevalence of the N. winds, the sea is generally calm, and landing easy. In March commence what are called the *Marziales*, or Equinoctials, when the ebb and flow of the tide extends 90 yards, and in the flood tide the swell is so heavy as to dash itself on the beach to the distance of from 100 to 120 yards. After March the sea becomes calm again until July. From July to December it is rough, with high winds at night from the S.E., with a strong current. The Hamburg brig "Triton" dragged her anchors on the 23d of October a distance of 15 miles, losing two of them. The population of the port is about 200, and there is little hope

tapa and San José are entirely open to the sea, without protection of any kind, and vessels are unable to approach within a mile and a half of shore, where they are obliged to anchor on a bottom of shifting sand, prepared to stand out to sea at a moment's warning. Communication is carried on with the shore by means of small boats and lighters, which encounter great danger from the surf, and which are often prevented, for many days in succession, from venturing beyond the mouth of the Michatoyat, within which they run for shelter. This fatal deficiency in ports on the Pacific, near where the bulk of its population lies, must always prove a formidable obstacle to the material progress of the country. San José, nevertheless, is rising in importance; and, since a monthly line of steamers has been established between there and Panama, touching at all intermediate ports, the larger part of the commerce of the state has taken that direction, instead of going, as formerly, by way of Izabal, to Belize.

Izabal (lat. $15^{\circ} 24' N.$, and long. $89^{\circ} 9' W.$) is simply a disagreeable landing-place on the south shore of the Gulf of Dulce, in a hot, pestiferous locality, and can only be reached by vessels of light draught. Its commerce is chiefly, if not entirely, at second-hand through Belize. It can only be reached from the interior by a long, difficult, and dangerous journey, over high mountains and deep rivers, and must sooner or

of its increasing, as the locality is unhealthy in the extreme, and destitute of fresh water. Vessels find it difficult to obtain supplies, unless provision is previously made to procure them from Escuintla, fourteen leagues distant. There are no means for refitting or repairing vessels. Altogether, the port of San José is so bad that it is proposed to give it up for a new port at a place called *La Barra de San Luis*, in the department of Sacatepequez, to the westward of Masatenango. The decree for that purpose has already been issued, and, as soon as the necessary buildings have been erected, it will be carried into effect."—*Report of British Consul for 1856.*

later be abandoned. It has a population of about 700 persons, including garrison and prisoners.

Santo Tomas de Castillo is a fine harbor, lying at the head of the Bay of Amatique, nearly midway between the Gulf of Dulce and the Motagua River. Its greatest length, from east to west, is about three miles, and its width nearly two miles. The entrance is from the north, and is broad and easy. Its greatest depth of water is five fathoms (30 feet), shoaling gradually to three fathoms within a quarter of a mile of the shore. It was first indicated as a port in the year 1604, by Alonzo de Castillo, President of the Audiencia of Guatemala, who sought to transfer here the commerce of Puerto Caballos in Honduras, as a means of escaping the attacks of the buccaneers, who made frequent descents on the latter. The attempt was not successful, and Santo Tomas, with its acknowledged advantages, was allowed to remain unoccupied until 1844, when, with a large tract of adjacent country, it passed into the occupation of a Belgian company of colonization, which established a settlement here, and made large preparations for colonization from Europe. The attempt failed; the company was dissolved, and in 1854 the government of Guatemala resumed its authority over the port. Since that time it has been gradually deserted, and is now, without commerce, fast relapsing into its primitive solitude. With undoubted capacities as a port, it occupies an unfavorable position for communication with the centres of population and industry, and can probably never attain to importance until the interior country becomes filled up with inhabitants, or passes into the possession of a more enterprising and more active race.*

* "The port of Santo Tomas is one of the best in Central America, being en-

tirely sheltered from the northeasterly winds. It is spacious and of easy entrance, having sufficient depth of water for the largest vessels. It is about six miles in depth, the same in width, and about two and a half across the entrance, which is quite clear, and vessels of from twelve to fifteen feet draught of water can anchor within a few fathoms of the town of Santo Tomas, situated at the bottom of the bight. It is completely sheltered by the hills that surround it, which are every where covered with a dense forest. Near the sea the land is low, with the exception of the spot where the town stands, which is a flat of some extent, a few feet above the level of the bay, where the variation of the tide does not exceed two feet. This town was the commencement of operations of the Belgian colony in 1843; several large buildings were constructed, and the streets laid out with some regularity, and considerable sums were expended in clearing lands, etc., but, owing to mismanagement, and an unfortunate selection of persons that were sent out as colonists, the company failed in its attempt, and now the greater part of the edifices are in the most dilapidated state, without the remotest prospect of being repaired or renewed. The population at one time rose to about 600, the greater part of which were colonists, but probably it is not now half this number, many of the immigrants having returned; others have sought shelter in the interior of the country, and a considerable number died at Santo Tomas in the most abject misery. An attempt was made to cut a road from the town to the interior, to meet that which goes from Izabal to Guatemala, distance about twenty leagues, and another to the River Motagua, nine leagues in length, but neither have ever been made useful, although large sums have been expended on them; consequently, the only present means of intercourse between Santo Tomas and the interior of the republic is by water to Izabal, which is effected by schooners and small craft in a few hours. Vessels from England, bringing goods for the interior, come direct to Santo Tomas, where they enter and discharge their cargoes, either landing them at the custom-house stores there, or transshipping them to the schooners that are employed for the purpose of conveying them to Izabal. Some seven or eight years since, from ten to fifteen vessels from Europe arrived yearly at this port, some of them loading mahogany and other produce of the country for the homeward voyage; but within a few years, and since the importation of goods by the Pacific ports, the trade through Santo Tomas has considerably fallen off, and during the past year only seven vessels have come from Europe to this port and Livingston. The custom-house at Santo Tomas is dependent on that of Izabal. In like manner, the chief military and civil authority there, with a garrison of twenty-five men, is under the immediate orders of the commandante-general of the district, who also resides at Izabal. Santo Tomas and its neighborhood can boast of no trade beyond the few articles required for so reduced a population, the laboring part of which occupies itself in the cultivation of yams and plantains for their consumption and for sale on the coast."—*Report of British Consul, 1856.*

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CHAPTER XXIII.

POLITICAL ORGANIZATION—RELIGION—MILITARY—PRODUCTIONS — COCHINEAL — COFFEE — COTTON — MINERALS — COMMERCE—REVENUES—TARIFF—FAIRS—DEBT.

THE political organization of the state has undergone so many and so rapid changes, that it is almost impossible to ascertain or comprehend its details. Having been the seat of the old vice-regal court, of the leading officers of the Church, and of a titled aristocracy, it is not surprising that the city of Guatemala has always been more or less under reactionary tendencies. These were strongly contested by the other states, more removed from those influences, so long as Guatemala constituted a part of the old federal republic. Since the formal separation of the states, however, notwithstanding the strenuous efforts of the liberal party within its own borders, it has fast relapsed into a political condition scarcely differing, except in name, from that which existed under the crown. The government is a practical oligarchy, in which the real power is exercised by a few leading families, the *soi-disant* aristocracy, and the dignitaries of the Church. The nominal head of the so-called republic is Rafael Carrera, an uneducated Mestizo, who bears the titles of "Captain General" and "*Presidente Vitalico*." By certain acts, consummated in 1854, he is not only made president for life, but authorized to name his successor! Carrera, as is well known, was originally a pig-driver, who in 1832 headed an insurrection of the Indians against the "whites,

foreigners, and heretics." These, it was alleged, had poisoned the springs of the district, and thus produced the cholera, which in that year devastated the country. This delusion was encouraged by a considerable body of the unscrupulous priesthood, as a measure of retaliation against the federal government, which had suppressed the convents, abolished tithes, and otherwise interfered with the traditional prerogatives of the Church. To this insurrection, which soon became a veritable war of castes, is to be ascribed the dissolution of the federation in 1839.

After that event it was found that Carrera had become far too powerful with the Indians and the great mass of the lower orders of the people to be set aside, and the bloody failure of one or two attempts to expel or destroy him taught both the aristocracy and the Church the necessity of pursuing a conciliatory and temporizing policy with the man whom they could not crush. Under the influences which they have brought to bear, Carrera, although sometimes violent and intractable, has finally become a most convenient and effective instrument in their hands. His vanity is amused with high-sounding titles; his avarice, which is boundless, is gratified with concessions of estates, with confiscations, and the complete control of the treasury; and occasionally he is permitted or encouraged to satiate his taste for blood by savage forays on the territories of neighboring and weaker states.*

With his establishment in power the Church also has assumed new pretensions. Extinct convents have

* His titles, as printed in the official acts, are, "His most excellent Señor Don RAFAEL CARRERA, President for life of the Republic, Captain-General of the Forces, General Superintendent of the Treasury, Commander of the Royal Order of Leopold of Belgium, Honorary President of the Institute of Africa, decorated with various insignia for actions in war," etc., etc.

been revived, and new ones founded.* The Jesuits, expelled from New Granada and other liberal South American states, have found a refuge and welcome in Guatemala, and have been intrusted with the leading offices of education. A censorship of the press has been established, and the archbishop invested with the power of prohibiting the introduction of such books as he shall regard opposed to public morals, sound philosophy, and the teachings of the Church.† The right of suffrage has been so circumscribed, and the forms of election so complicated, as to reduce the Legislative Council to a spiritless, dependent body, only useful for registering decrees originating elsewhere. In short, the whole government, in its principles, spirit, and practice, is reactionary in the extreme, and it is difficult to say if political selfishness or religious bigotry be the leading element in its composition. With its “president for life,” and other fantastic features, it is broad burlesque on free institutions to call it republican.

The military force of the state, in time of peace, is,

* “The religion is the Roman Catholic. Some years ago religious toleration was decreed by the federal government of Central America; but since the disappearance of the federation, the state governments formerly composing it have not made any enactments legalizing the public celebration of divine worship by persons of a different persuasion to that of the Roman Catholic. An exercise of any other religion, unless made with great privacy, might subject the parties attempting so to do to serious trouble, annoyance, and probably persecution, owing to the ignorance and fanaticism of the priests and the lower orders.”—*Report of British Consul*, 1856.

† The law upon this point is a revival, I believe, of that which was drawn up by Señor Irisarri, present representative of Guatemala in the United States, in 1828. It provides that the archbishop may proceed, in conformity with the canons of the Church, against all persons having books or pictures therein prohibited. The civil and military authorities are obliged to carry out the edicts of the archbishop in this respect. The persons holding obnoxious books are to be fined ten dollars for the first, and twenty dollars for the second offense. Imprisonment follows on the third; and in all cases the offensive documents are to be burned.

in the capital, 68 officers and 550 men; in the other portions of the state, 57 officers and 1000 men; total, 125 officers and 1550 men. It is believed 10,000 men could be raised in case of emergency.

With an excellent climate, a fruitful soil, capable of yielding every variety of agricultural products, from the wheat and the wool of Los Altos to the cochineal, cacao, coffee, cotton, sugar, and indigo of the intermediate and low grounds, Guatemala nevertheless, with nearly three times the population of San Salvador and eight times that of Costa Rica, has a foreign commerce scarcely exceeding that of each of those states.* This is in part due to the disadvantages of its commercial position, in part to the exclusive and repressive character of its government, in part to the lack of roads, but more than all to the want of education, enterprise, and habits of industry among the people themselves. This deficiency was greatly felt during the existence of the old republic, when attempts were made by the liberal government of that period to introduce the Lancastrian system of education, trial by jury, etc., and when the largest encouragement was extended to foreigners to establish themselves in the country.† It was, how-

* "The general fertility of the soil, its aptitude to every species of cultivation, and the agreeable variety of climate, can not be too highly extolled; in these particulars it yields to no section of Central America, and is to be preferred to most. Maize and wheat are abundant, and of superior quality; rice is excellent; the tropical fruits and vegetables are good and in great variety; the produce of leguminous plants is equal to the best of those grown elsewhere. All European fruits and garden-stuff grow kindly; and if the Indians, who are the only cultivators, were better instructed in the art of horticulture, they could be carried to an enviable degree of perfection; in fact, but few regions are so well endowed with the capabilities of producing all that ministers to the comforts as well as luxuries of life. Of things more important in a commercial view, cochineal at present holds the first rank; to which may be added cacao, tobacco, sugar, coffee, silk, cotton, wool, and a numerous list of minor articles."—*Baily*.

† A "Law of Colonization" was adopted in 1824 by the Constituent Assembly of the republic. Of this law Mr. Baily observes:

ever, precisely from opposition to these measures that the liberal government was assailed and overthrown; and when the present dictator of the country entered Guatemala for the first time, at the head of a wild horde of armed Indians, it was under a commission purporting to come from the Virgin Mary, let down by the priests from the roof of the great church of Mita, and authorizing him to visit "death on whites, foreigners, and heretics." The more revolting features of this demonstration have disappeared, but the spirit which inspired it remains. A system of exclusion against foreigners is rigorously pursued, and the strangers who venture into the state do so at great personal hazard, and at risk of every kind of humiliation and annoyance. A people and government thus ignorant, bigoted, and conceited, can have but few stimulants to industry, commerce, and social improvement. Without colonization on an extended scale, supported by judicious laws, the useful arts can never be introduced or agriculture advanced, and the spasmodic attempts to encourage them, on the part of a few enlightened and patriotic citizens in the capital, can only prove melancholy failures.

Besides the usual products of the tropics, the tablelands of Solola, Quesaltenango, Totonicapam, etc., produce wheat in large quantities. Here, also, extensive flocks of sheep are maintained for their wool. It is

"This law, conceived by men of more enlarged ideas than the generality, who believed truly they were promulgating it for the advantage of their common country, was ultimately of no avail, from not being enforced and adequately supported by their successors. These, possibly without being aware of it, seem to have been imbued with the ideas of jealousy and exclusion, so peculiar to Spanish domination; and radicated by a sort of prescription during long ages, were apparently not willing that strangers should be permitted to participate in the advantages a fruitful soil would yield to their labors, even when they themselves were not disposed to till it, or were without resources for doing so."

of coarse quality, but largely used in the manufacture of the *jerga*, or native cloth, which is in universal use among the lower classes of the people.* Pears, peaches, apples, potatoes, etc., are also produced in these departments, and often carried on the backs of men to the city of San Salvador, and other remote points, for sale or barter.

The wool crop of Los Altos for 1855 was estimated at \$35,000 in value; in 1856 at \$60,000; and in 1857 at \$100,000. At an average price of seven cents per pound, this amount involves a product of not less than 1,430,000 pounds.

But, as has already been intimated, the great staple of Guatemala is the cochineal. The insect was introduced by Capitan General Don José de Bustamante in 1811, from Oaxaca, in Mexico. It is said to have been carried from Solola to Oaxaca in the first instance; but it probably existed there, as it does in various parts of Honduras, in a wild state, known as "*cochineal silvestre*." The little that was produced previous to 1822 was used in the country, but after the independence it

* "Commencing at the most northern part of the state, in the Department of Los Altos, wheat of a superior quality is produced; but, as there are no roads, and as it must be carried on the backs of mules by tracks opened in the forest, it can only be sent to a short distance. The value of wheat of the best quality does not exceed one dollar a *fanega* of 300 lbs. (six bushels) in Quesaltenango, while the carriage of the same quantity to Guatemala, which is not quite 100 miles distant, costs six dollars. About 2000 *fanegas* are sent annually to La Antigua and Guatemala. This province contains considerable flocks of sheep, which may be purchased at about four *reals* (50 cents) each. The quality of the wool is variable, but none is equal to the better qualities of Germany or Spain. It is usually sold in Quesaltenango at a *medio* (six cents) a pound, all qualities mixed together. When in demand it occasionally brings a *real* (12½ cents) per lb., but is never exported, as the freight to the nearest port would cost more than its value in any part of the world; so that it is manufactured by the natives into a *jerga*, or coarse twilled fabric, thick-fringed and bordered checks and stripes for jackets and *ponchos*. The prices of these articles are moderate, and lower than they could be made for in England."—*Dunlop's Travels in Central America*, p. 261.

became an article of export of constantly increasing importance. The export in 1827 was barely 100 seroons (of 150 lbs. each); in 1830 only 300 seroons; in 1831 it rose to 700 seroons, and in 1849 to 9794 seroons. The subjoined table shows the annual exports of the article for six years:

1849	.	.	.	.	.	1,469,100 pounds.
1851	.	.	.	.	.	1,231,610 "
1852	.	.	.	.	.	567,000 "
1853	.	.	.	.	.	312,700 "
1854	.	.	.	.	.	1,757,300 "
1855	.	.	.	.	.	1,204,510 "

It will be seen from the variations expressed in this table that the cochineal crop is very precarious, having been nearly sixfold greater in 1854 than in the year preceding. Its success depends upon a number of contingencies, as will appear in the paragraphs which follow.

Although constituting the great staple of Guatemala, the cochineal, after all, is only produced in two or three districts. The greatest quantity is cultivated in Amatitlan, on the borders of the lake of the same name, and in the neighborhood of "Antigua Guatemala." The method of production deserves a special notice.

It is, of course, well known that the cochineal is the dried body of an insect, which reaches its greatest perfection on certain varieties of cactus, the *nopal* of the ancient Mexicans. The variety of nopal which is preferred is that known as *mosote*. It has leaves generally about a foot long, four or five inches broad, and two inches thick, of a light green color, bearing a bright crimson flower. The nopals are planted in rows, placed far enough apart to allow a person to pass easily be-

tween them. An ordinary plantation covers from one to ten *manzanas*, equal to from two to twenty acres. There are plantations, nevertheless, containing as many as a hundred and fifty *manzanas*, or three hundred acres. These estates, in good condition and full bearing, are valued at from \$300 to \$400 per acre. The nopal lasts about twelve years, supporting two crops of the insects annually.

The operation of distributing the insect over the leaves of the nopal is called *seeding*, and takes place at different periods, according to the circumstances of climate in different localities. In the vicinity of Amatitlan the first seeding takes place early in October, soon after the close of the rainy season, or, as it is there called, the winter. During this season, the insect, which can not support the rains, is preserved on leaves of the nopal cut from the parent stem, and ranged in long, narrow buildings or sheds, called *almacenes*. These are open on the side exposed to the sun; but during the first six weeks of the rainy season this side is covered by a screen of cotton cloth, to protect the young insects from the devastations of a small fly which lays its eggs among them, producing caterpillars which feed on the insects. As soon as the insects preserved in the *almacenes* begin to deposit their young, they are distributed in little boxes made of palm leaves, called *cartuches*, a hundred in each. These are attached to the leaves of the cactus; and if the weather happens to be warm and favorable, the leaf will be covered with the young insects within a few hours thereafter. The *cartuch* must then be pinned to another leaf, and so on until the plantation is seeded. Care must be taken not to permit too many of the insects to attach themselves to a single leaf,

since they would fail to obtain adequate nourishment, and never reach perfection, producing, when dried, only a small-grained and inferior cochineal, called *grancel-la*, which is not worth half the price of the perfect qualities. The seeding can not be performed when the wind is high, as the young insect is blown away and prevented from fixing itself on the leaf. Cold weather, and even a heavy dew, will often destroy the insects at this stage, and a shower will wash them from the leaves, and ruin an entire crop in a few minutes. What is called in the country *cascarilla*, and known in commerce as the "black cochineal," is the dried bodies of the mother insects gathered from the *cartuches* after they have done breeding. It is regarded as the best, and brings a higher price than the "silver cochineal," which name is given to the insects when dried before breeding. If the young insect escapes injury during the first ten days after it attaches itself to the leaf of the nopal, it has a fair chance of reaching perfection. At the end of about twenty days it undergoes its first *muda* or transformation, and about a month thereafter its second change, with each change slightly shifting its position on the leaf. At the period of the first *muda*, the male and female insects are of about the same number; but fifteen days before the second change, the male grub changes into a chrysalis, with a downy covering. He next spins a fine thread, and, letting go his hold on the leaf, hangs therefrom for fifteen days more. He then breaks his shell and emerges in the form of a very small fly. As soon as the impregnation of the females is effected, he drops from the leaf and dies. The insects remaining, therefore, are all females, which reach maturity in about ninety days, and then commence to breed. It is left

upon the leaf long enough to produce a sufficient quantity of young insects for the second crop, which attach themselves to the same leaves, and repeat the changes already described. The full-grown insect is then removed from the leaf by touching it with a pointed piece of cane, dried in flat baskets, and then packed for market. The second crop of the year is always inferior to the first both in quantity and quality.

In addition to the risks of damage or destruction of the cochineal crop to which I have alluded, there are others which contribute to make it still more precarious. In Amatitlan the nopal is often attacked by a species of large ant, which eats off the young shoots, preventing its increase. The nests of these ants frequently extend to a great depth in the ground, spreading out from ten to twenty yards in every direction. A variety of small caterpillar occasionally makes its appearance among the cochineal insects, and, unless removed by hand, would destroy them entirely. A worm, called by the natives *anguilla* (the eel), also makes its appearance at intervals of three or four years, and causes great damage. Fortunately, however, these pests do not generally extend over all the plantations at the same time, so that, while the general crop is often greatly reduced in quantity, it is seldom entirely lost.

Mr. Dunlop gives the following additional particulars on the production of the cochineal :

“When the second crop is gathered, which is usually about the end of March, the next care is to keep a sufficient number of insects for the next season’s seeding. Only a small number are preserved, and, being put into small bags, similar to those before described, are attached to leaves, carefully ranged upon shelves under the long, narrow buildings called *almacenes*, the leaves being seeded in a similar manner to the growing plants.

This must attain its full size, and commence to breed again in about ninety days, which brings it to the month of July, when the insect so reared is gathered, and again attached in the same manner to fresh leaves of the cactus, ranged under cover in the same manner. This crop is again ready for gathering in the month of October, when the rains cease in Amatitlan, and is sold for seeding the cochineal estates. The price, being regulated by the supply as compared with the demand, is but little affected by the value of dry cochineal, the live insect being always then worth at least three or four times its value in the months of April and May, when it is dried for exportation. A good cochineal estate requires in the month of October from 100 to 140 pounds of the live insect to seed each manzana, and each pound of the insect so used ought, if the weather be good and all circumstances favorable, to produce eight pounds in the crop time. The January seeding in old Guatemala being much heavier, as only one crop is there taken, from 150 to 170 pounds are generally used to seed each manzana. In Amatitlan, the first crop, collected in January, generally yields from 800 to 1200 pounds of the live insect from each manzana of cactus, if a good estate, which is sold at from twenty-five cents to one dollar a pound, according to the demand, the abundance of the crop, etc.; but the first crop is, one year with another, calculated to pay all the expenses of weeding and managing the estate, and the cost of the seed, cochineal insect, and the labor of seeding it, etc. The second crop is always dried, and each manzana will yield from 1800 to 2700 pounds of the insect, and from 600 to 900 pounds of dry cochineal, which is considered to be the net profit of the cultivator.

“In old Guatemala, each manzana ought to give 3150 to 4050 pounds of the live insect, and 1050 to 1350 pounds of dry cochineal, three pounds of the live insect yielding as nearly as possible one of dry cochineal.

“The cost of production in old Guatemala, one year with another, allowing for the current losses from rain, etc., is rated at four reals (or half a dollar) per pound. The cochineal insect, when not intended for breeding, is, as soon as gathered, spread out very thin upon flat, shallow trays, made of cane, and covered

with cotton cloth, and put into stoves constructed on purpose, each capable of containing from 100 to 200 baskets, and either heated by burning charcoal, put in large clay vessels made on purpose, or by a small brick flue, into which the wood can be put and lighted from the outside. The former method is the most costly and tedious, but gives the finest colored cochineal. When completely dry, it is sifted, cleaned, and packed in bales, covered with an untanned ox hide, containing 150 pounds, in which state it is sent to Europe for sale. During the wet season a cochineal estate requires almost constant attention in cleaning and keeping down the weeds, and this must be done at least five times in the year in Amatitlan, or the cactus will be injured, though in old Guatemala not more than two or three cleanings are given. The cactus must also be pruned at least twice in each year, once at the commencement of the rainy season in May, to make it sprout strongly, and again at the commencement of the dry season in October, when it is necessary to remove the long shoots, which would, by their weight, break down the cactus, and to trim the plants, so as to give them an equal height and form."

Some eighteen or twenty years ago, considerable plantations of coffee were made in different parts of the state, and, had these undertakings been followed up with proper steadiness, constancy, and attention, it might, perhaps, by this time, have become an export more valuable and important than cochineal. Unfortunately, its cultivation was abandoned, owing to the insurrections of the Indians, in 1838 and in 1848, as property of this kind was peculiarly exposed to the depredations of the marauders that infested the country during those periods, and the years intervening between them. Some attempts have been made again to introduce its cultivation, by making fresh plantations, but hitherto not to any extent worthy of notice.

Cotton is produced, but it is not an article of exportation, and I believe the cost of transporting it to

the coast for shipment would be too great to render it worthy of attention. It is of a very fine quality, but the fibre is said not to be so long as the cotton in other parts of America.

Guatemala is not distinguished for its minerals. There are mines in Los Altos which were successfully worked during the time of the Spanish dominion, but, since then, Guatemala is the only section of Central America wherein the precious metals have not been extracted. Many attempts, however, have been made, but without successful results, until the present time, unless, perhaps, an exception be made in favor of the mines of Alotepeque, near the confines of Honduras, in the Department of Chiquimula, now worked by an English company. The mineral wealth of the district consists principally in silver, lead, and copper. It is said an abundance of iron ore is found in different parts of the mountain. It possesses also abundance of water-power.

As elsewhere observed, the foreign commerce of Guatemala is small, much less proportionately than that of any other state of Central America, with the possible exception of Nicaragua. Formerly this commerce was chiefly with England, through the British establishment of Belize. But now, although the commerce still remains principally with Great Britain, its course of transit is changed, and takes the direction of Panama; it being direct, and not through the interposition of brokers, for such, in fact, were the merchants of Belize. With the opening of the projected railway through Honduras, the facility of direct traffic with the United States and Europe will be much increased, while the cost of supporting it will be greatly reduced beyond what it now is *via* Panama. Some idea of

the extent of this commerce may be obtained from the following table, showing the amount of the imports and exports of the state for seven years, from 1851 to 1857 inclusive:

Years.	Imports.	Exports.
1851	\$1,581,884	\$1,404,000
1852	976,943	868,550
1853	878,831	599,047
1854	826,481	2,033,300
1855	1,206,210	1,282,891
1856	1,065,816	1,708,963
1857	1,136,517	1,615,388
Totals for 7 years	\$7,672,682	\$9,613,099

Of the total imports during this period, about one fortieth was from the United States, and three fifths from Great Britain. Next to Great Britain, France furnished the greatest amount of supplies.*

The exports from 1851 to 1855 inclusive amounted to \$6,188,298, as shown on the next page:

* The countries and places from whence the importations of Guatemala have been made, during a period of five years, from 1851 to 1855 inclusive, are as follows:

	By the Atlantic.	By the Pacific.	Total.
Germany	\$113,608	\$135,479	\$249,087
Belize	670,492	.....	670,492
Belgium	93,966	52,996	146,962
California .....	.....	24,161	24,161
Chile .....	.....	645	645
Costa Rica .....	.....	21,777	21,777
Spain	99,305	85,414	184,719
San Salvador .....	.....	10,546	10,546
The United States	107,604	54,461	162,065
Havana	152,942	.....	152,942
France	562,670	259,476	822,146
England	2,092,157	927,650	3,019,807
	\$3,892,744	\$1,572,605	\$5,465,349

Cochineal,	45,029 seroons, 150 lbs. each . .	\$4,854,890
Indigo,	8,374 seroons, 150 lbs. each . .	1,001,638
Sarsaparilla,	2,732 quintals	40,330
Timber		37,500
Mineral ores (silver and lead),	165 sacks . . .	6,600
Hides, 43,682 (in 1855, 20,991)		49,498
Coarse woolen manufactures exported to the		
Central American States, 2274 bales		197,842
Total		<u>\$6,188,298</u>

It should be remarked that only a small portion of the indigo exported is produced in Guatemala, but is obtained from San Salvador, and probably should not figure among the exports from the former state. The value of cochineal exported in 1856 was \$1,381,245, which fell off in 1857 to \$1,017,270.

The revenues of Guatemala are derived from very nearly the same sources with those of the other states of Central America, viz., customs, sales of spirits, stamps, etc. In 1855, the receipts of the government, from all sources, were as follows:

Customs	\$287,558
Tonnage dues	2,415
Imposts on tobacco, etc.	3,925
Interior taxes	58,880
Imposts on cattle killed for market	18,324
Stamps	9,874
Sale of lands	10,721
Post-office revenues	1,923
Excise on native rum and other spirits . . .	305,923
Total	<u>\$699,543</u>

The expenditures for the year 1855 were \$649,458. For 1856, the total revenues were \$1,040,144; total expenditures, \$1,024,358. In 1850, the total revenues of the state were \$777,059; expenditures, \$769,075. It would appear, therefore, that although the revenues

had diminished about one seventh within five years, the expenditures had diminished in proportion, and still remained less than the receipts. The extraordinary expenses of supporting the contingents of the state in Nicaragua during 1857 have probably swelled the expenditures for that year beyond the ordinary revenues.* The excess must have taken the form of permanent debt, or else have been met by forced contributions—the usual mode of meeting unexpected demands.

The custom duties were formerly twenty-four per cent. on imports through Atlantic ports, and twenty-two per cent. on those through the Pacific ports. The *ad valorem* system of duties has lately been given up, and the system of *specific* duties adopted. The effect, it is said, has been an average augmentation of duties equal to from 30 to 35 per cent. *ad valorem*, which has only been in part met by increased facilities of payment in depreciated government paper. Cochineal pays an export duty of five eighths of a dollar on each seroon to the Church. Every package of goods exported pays one eighth of a dollar on the Pacific, and two eighths on the Atlantic coast. Gold is subject to an export duty of one per cent., and coined or wrought silver of three per cent. on their value. The exportation of the live cochineal insect, as well as of the seeds of the *jiquilite*, or indigenous indigo plant, is prohibited. The revenues from customs alone, for five years, were, for 1851, \$372,643; 1852, \$228,246; 1853, \$203,110; 1854, \$182,103; 1855, \$287,553.

The following statement shows the shipping and

* An official document, of the date of September, 1854, states that \$24,377 has been paid to the widows and orphans of the troops who perished in the Nicaraguan war.

tonnage which came to the ports of Guatemala during five years, from 1851 to 1855, viz.:

	1851.		1852.		1853.		1854.		1855.		Total.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
English	18	3990	26	4296	7	1651	11	3758	12	4140	74	17,835
French	1	229	3	764	2	644	2	708	2	772	10	3,117
Spanish	11	1255	8	1173	6	735	10	978	11	1509	46	5,650
United States	1	199	2	230	1	199	5	963	3	460	12	2,051
Belgian	7	1367	4	836	1	184	1	210	..	....	13	2,597
Sardinian ..	1	369	1	200	..	....	1	380	..	....	3	949
Danish . . . . .	..	....	1	120	..	....	1	157	1	170	3	447
Hamburg...	2	430	..	....	1	396	2	503	4	967	9	2,296
Cent'l Amer.	3	570	5	710	8	820	9	935	8	931	33	3,966
Totals ..	44	8409	50	8329	26	4629	42	8592	41	8949	203	38,908

A number of fairs are held in different parts of the state at different periods of the year. The principal one is that of Esquipulas, elsewhere mentioned. A large quantity of merchandise is sold during this fair, and importations are frequently made from England by the port of Izabal solely for this object. It is likewise a fair for cattle. A second fair is held there in the month of March or April. Other fairs are held at Rabinal, in Vera Paz, for dry goods; at Masatenango for cattle, cocoa, and dry goods; at San Pedro Ayampuk, to which a pilgrimage is also made; at Solola for dry goods, fruit, and live-stock; at Quesaltenango and Chimaltenango for woolen manufactures of the country. In the neighborhood of the city of Guatemala, at Jocotenango, a fair is held every year, which lasts from the 2d to the 15th of August, where horses and mules are brought for sale. Other fairs of minor importance are held in different parts of the country.

The proportion of the national debt of the old federation of Central America devolving upon Guatemala-

la is \$500,000, which, by arrangement with the foreign creditors, May, 1856, was funded at an annual interest of five per cent. One half of the proceeds of the customs at the port of Izabal were pledged to cover the interest, and as a sinking fund for the liquidation of the principal. The floating debt of the state in 1853 was \$461,337.

CHAPTER XXIV.

DEPARTMENT OF VERA PAZ—DISTRICT OF PETEN—LAKE OF
ITZA—ANCIENT MONUMENTS — PEOPLE AND HISTORY —
LANGUAGE.

THE Department of Vera Paz is much the largest of the political divisions of Guatemala, comprising nearly half of the territory of the state. It is least known of any portion of Central America, and for this reason, as equally for containing in its midst the celebrated yet mysterious Lake of Itza, or Peten, it has the interest of an unsolved problem to geographers. Nor has it fewer claims upon the ethnologist and antiquary. Within its fastnesses, with habits, religion, and laws unchanged, still exist the remnants of the indomitable Lacandones, who figure so largely in the story of the Spanish Conquest, the cruel Itzæ, and the warlike Chols and Manches. Its forests hide numberless monuments of ancient art and superstition, and within their depths, far off on some unknown tributary of the Usumasinta, the popular tradition of Guatemala and Chiapa places that great aboriginal city, with its white temples shining like silver in the sun, which the Cura of Quiché affirmed to Mr. Stephens he had seen with his own eyes from the summits of the mountains of Quesaltenango.*

* There is no good reason for supposing that any city of this kind exists; but it is not improbable that considerable towns, of ordinary Indian construction, may be found in the more secluded districts. The notion of a great city is, nevertheless, very widely entertained by the populace of Guatemala and Chiapa. I may mention, in illustration, that on the 3d of August, 1849, the Secretary of

Vera Paz has three natural divisions. The southern division is a comparatively narrow belt, lying to the south of the mountains of Cajabon and Chisec (extending nearly east and west), and is drained by the Polochoc and its affluents, and by the Rio Lacandon, which, flowing northward for a great distance, unites with Rio de la Pasion, and forms the Usumasinta. This division is best known, and in general features and population differs but little from the adjacent portions of the state. Here are Cajabon, Coban, Rabinal, Tactic, and other considerable towns, the inhabitants of which are almost wholly Indian.

Passing the mountains of Chisec and Cajabon, however, which are of great elevation and intricacy, the traveler comes to a high and level table-land, in which the Rio de la Pasion takes its rise and collects its waters, flowing to the northwest, while on its eastern borders, deeply seaming its edges with their swift currents, the numerous rivers take their rise which flow eastward, through the territories of Belize, into the Bay of Honduras. Near the streams which flow through it this table-land is densely wooded, but elsewhere it spreads out in broad savannas, filled with numberless broad but shallow lakes, and traversed here and there by low ridges covered with pines and oaks. Large districts are so flat, and the drainage so slight, that during the rainy seasons the lakes spread out and join each

State of Chiapa addressed an official letter to the Prefect of the Department of Chilon, stating that he had been informed that in the vicinity of San Carlos Nacatlan, beyond the Sierra de la Pimienta, a great city had been discovered in the distance, with large edifices, and many cattle in its pastures; and that, although there appeared to be no road to it, yet that it was supposed it could not be more than two days' distant. He therefore orders the Prefect to make all possible efforts to reach the city, and to report the result to his office in San Christoval. As nothing further was ever heard of the discovery, it is to be presumed the city could not be found by the Prefect.

other in immense expanses of still water, across which it takes the Indians two or three days to pass in their canoes.

The Rio de la Pasion flows off to the northwest, uniting far down with the Lacandon, thus forming the Usumasinta, which runs nearly north into the Gulf of Mexico. The vast region through which it passes, filled with mountains, and involved in unexplored forests, comprises a district more than a hundred and fifty miles broad, by upward of two hundred in length, having an area of not less than thirty thousand square miles. It embraces nearly one third of Guatemala, and a large part of Chiapa and Tabasco. Within it the Lacandones, the Chols, Manches, etc., have their abodes. The magnificent Usumasinta is their natural highway, down which their canoes sometimes descend to the Spanish settlements of Tabasco, carrying tobacco, cocoa, or sarsaparilla, which they sullenly and silently exchange for instruments of steel, and then disappear again in the forests. No adventurer has yet penetrated to their fastnesses; and every attempt to ascend the river, beyond certain points, has been met with such demonstrations of hostility as to discourage all further efforts. The most that we know of the country and its character is derived from the account of M. Morelet, who in 1846 ascended the River Usumasinta upward of two hundred miles, following its windings from the Laguna de Terminos, or Xicalanco, to a place called Tenosique, where he struck through the wilderness nearly due east to the lake of Peten.

Tenosique is the frontier town of the Christianized or tame Indians (*Indios mansos*) of Tabasco, and consists of about a hundred huts, situated on the right

bank of the river, in the midst of a vast forest, which, owing to the peculiarities of a climate neither too wet nor too dry, is clothed in eternal green. From Tenosique to Peten the distance was computed by the Indians at eighty leagues. It was nevertheless accomplished by M. Morelet in thirteen days, over a path which it seems is traveled several times a year by little caravans from Peten, bringing down cheese and tobacco to exchange for salt, cotton, etc., in Tabasco. M. Morelet describes the country as firm and rocky, densely covered with trees bound together with vines. The forest, however, does not possess the magnificence of those on the better-watered alluvions of Tabasco, but still far surpasses in luxuriance and the size of its trees any of those of Europe. Its monotonous aspect of heavy trunks and dark foliage, beneath which few flowers bloom, is nevertheless occasionally relieved by that gigantic flower, the *Aristolochia grandiflora*, which is never less than from eighteen to twenty inches in diameter. The calice at first resembles a swan suspended by the neck, the wings of which afterward spread themselves, and, bending upward, form a kind of violet helmet over the glowing leaves and petals of the flower beneath. With the exception of the *mamey*, the *sapote*, and the *limoncillo*, M. Morelet found no fruit-trees in the forest. Among the birds and animals, the only one remarkable is the *pavo del monte*, probably the most magnificent variety of the *gallinæ*.

The dense forest prevented M. Morelet from making very satisfactory observations in the country between Tenosique and Peten. He describes it, however, as falling off rapidly to the northwest, which is the general direction of the water-courses, and dotted over with an infinite number of isolated conical hills, rising

from a uniform surface. On the eleventh day of his journey he reached Sacluc, the first village of the district of Peten. Here he emerged from the forest upon a grand plateau, covered with savannas, alternating with clumps of trees, and circled round by blue hills in the distance. A day's travel over this great plain brought him to the borders of Lake Itza or Peten, "a body of blue water smooth as a mirror, in which was a little rocky island, purple in the setting sun, rising by a gentle slope, covered with the picturesque huts of its inhabitants, to the height of fifteen hundred feet, its top crowned with a church, in a thicket of graceful palm-trees." This is Flores, the capital of the district, containing about 1200 inhabitants.

From the account of M. Morelet, it would appear that Flores differs but little from the other towns of Guatemala, inhabited by Christianized Indians, except perhaps that from their isolation the people are more simple and confiding in their character.* It is irregularly built, the houses being apparently placed at a venture. They nevertheless form two principal streets, one following the perimeter of the island, and the other ascending to its summit, which, as already said, is crowned by the church and *cabildo*, or house of the municipality. The dwellings are rude cottages, some simple huts, with rarely any opening except the doorway. A few are plastered on the outside, and all are thatched with palm leaves. Chimneys, as well as glazed windows, are unknown. A few fruit-trees, calabash-trees, and palms, planted without order, give a partial shade to the huts, and somewhat relieve the glare of the sun on the naked

* Flores derives its name from Don Cerilio Flores, an eminent Liberal leader of Guatemala and vice-chief of that state, who was murdered by the Indians of Quesaltenango in 1826, under the instigation of the monarchical faction.

earth and bare stones. There are neither mechanics nor merchants in Flores, and the little necessary commerce of the people is limited to an exchange of products. Should any one require money, he prepares a basket of some article of common use, such as chocolate, bread, or candles, and offers it from house to house until he finds a purchaser. At long intervals, half a dozen adventurous men take each an ox or horse, and, forming a little caravan, drive them to Belize, bringing back a small supply of British merchandise, or traverse the long road to Tenosique with a few loads of cheese and tobacco, to make a corresponding purchase in Tabasco. With no incentive to industry, the people of Flores neither plant nor sow beyond what is just necessary to support existence. As a consequence, a partial failure of their small crops almost produces a famine. Thus, during M. Morelet's visit, a *fanega* of maize, which usually brings only from two to three reals, rose in value to not less than three dollars!

The Lake of Peten or Itza is irregular in form, having a total length of about forty-five or fifty miles, and an average width of three miles. Although it receives a number of streams, it has no outlet, whence the Indians sometimes call it *Nohukén*, rendered by the Spaniards *beber mucho*, i.e., Drink-much. It is of great depth, deepening rapidly from the shores, whence M. Morelet was at first inclined to believe it to be of volcanic origin. But he failed to discover any traces of igneous action on the rocks that surround it, which are a coarse limestone, gypsum (*plâtre*), and silex. It is belted with wooded hills, and, although no reeds appear on its surface, yet a little line of beautiful water-lilies runs along its shore. During times of scarcity their seeds are gathered and ground for bread. There

are alligators in the lake of a new variety, of which M. Morelet sent a specimen to Paris, where it figures in the Catalogue of the Museum as *Crocodylus Moreleti*. A variety of fresh-water turtle (the *icotea*), and several varieties of fish, are also found in the lake, one of which, called *cili*, of the genus *Chatæssus* (belonging to the *Salmonoides*), is most abundant. M. Morelet regards it as a new variety. It has a bitter flavor, and hence is little used by the natives. The arm of the lake in which the island of Peten stands is about nine miles long, by from one mile to a mile and a half broad. The body of the lake is from thirty to thirty-six miles long, by about four wide. Its depth is generally about one hundred and fifty feet. During the dry season the level of the water is sensibly lowered, while in very rainy seasons the water often threatens with overflow the huts built on the lowest parts of the island. Although usually calm and almost as motionless as a mirror, yet during the rainy season its surface is sometimes lashed into fury by the northeast winds, which blow over the high plains of Peten with vehement force. At such times, it is said, its waves have the majesty of those of the ocean. To the eastward of this lake are a number of smaller ones, which continue to the sources of the Rio Hondo, and which, during the period of rains, run into each other, forming a continuous chain through which canoes might pass. The first of these, *Sacpeten*, or White-Island Lake, is but two miles distant from Lake Itza; thence to Lake *Macanché* is six miles; thence to Lake *Yaxhaa* is thirty-six miles, the intervening country full of marshes; and from thence to the Lake of *Sacnab*, in which the River Hondo takes its rise, is only a short distance. The waters of Lake Yaxhaa and Lake Sacnab often intermingle.

There are a number of islands in the lake besides that on which the town of Flores is built, but they appear to be uninhabited, although on all of them are ruins of ancient establishments. On its shores are several towns, of which San Andrés and San José are the largest. With the people scattered on the slopes around them, they are estimated by M. Morelet to contain each 500 souls. He, however, saw no movement in their streets, and scarce a trace of cultivation. This shore was anciently occupied by the *Coboxes*, one of the powerful families of the Itzæes, but their degenerate descendants have abandoned themselves to debasing idleness and to drunkenness, their prevailing vice. On the southern shore of the lake are several caverns, the largest of which, called *Cueva de Jobitsinal*, is large, decorated with stalactites, and held in high estimation for its beauty by the people of Flores.

As observed by M. Morelet, although belonging politically to Guatemala, the district of Peten pertains naturally to Yucatan, with which country it is identified alike in history and population. Nothing in the configuration of the country interrupts its relations with that state; its climate and productions are almost the same; the same low ranges of mountains and the same valleys traverse both; only an immense forest separates them. On the other hand, in the direction of Guatemala, we find a high, abrupt mountain range forming a natural wall of division. Commerce and travel stop at the foot of this obstacle, which is inaccessible even to the hardy mountain mules. The rivers which gather their waters in its numerous gorges flow away in heavy volumes through profound forests unknown to civilization.

The most salient feature of the district is the pil-

ing up, especially near its centre, of wooded hills, interspersed with level plains, covered with grass, of every varying aspect. In proceeding to the southwest, however, we find real mountains, detached from the great chains of Chisec and Cajabon. From these the waters flow off in all directions to the Gulf of Mexico and the Bay of Honduras.

The soil of Peten is very fertile; the maize yields two hundred fold in ordinary years, and a certain white variety matures so rapidly that it may be gathered in ninety days after planting. Another variety, still more precocious, ripens in seven weeks. The cacao grows spontaneously in the woods; a fine aromatic variety of tobacco flourishes luxuriantly, even in the very streets of Flores; coffee bears fruit at the end of the first year; vanilla, sarsaparilla, Tabasco pepper, copal, dye-woods, are all indigenous, to say nothing of a multitude of vegetables, the fruits or roots of which have value as food, or may be usefully employed in the arts. The broad savannas are covered with herds of cattle, which supply abundant beef at a cost only nominal, and yield the milk, butter, and cheese which constitute the leading articles of food. There are numerous horses, with hoofs so hard as to preclude the necessity of iron shoes. But it appears that all these supplies and sources of wealth have materially diminished since the period of the Independence, under the rapacity and cruelty of foreign governors.

The climate of Peten is dry, and may be regarded as one of the most salubrious in all Central America. The dysentery and kindred diseases frequently manifest themselves on the approach of the rainy season, but they are not severe at their commencement, and would rarely prove mortal if treated with intelligence. But

there are no physicians in the country, and the medicines administered by unskillful hands are often more dangerous than the disease. Intermittent fevers occur in March and April, at the height of the dry season.

Lost, as it were, in a wilderness, it can be well understood that the people of Peten have made but few and slight advances in the arts and sciences. Reading, writing, and the simple rules of arithmetic are all that are taught at Flores. A school exists in each village of the district, toward the support of which parents pay the sum of one *medio* (six cents) monthly for each child which they send. A few rude *trapiches*, or sugar-mills, exist on the borders of the lake, worked by oxen, from which a sufficient quantity of a coarse sugar is produced for supplying the limited population.

The population of Peten, according to the census of 1839, was 6327, scattered over a surface of upward of 18,000 square miles. But, although isolated and diffused, with little industry, ignorant, and without a knowledge of the useful arts, the people of Peten, and especially of Flores, seem content and happy. Their principal resources in the way of amusements are the *fiestas* of the Church, *mitotes* or dances, and the music of the *marimba*. This is a native instrument, which all who have heard it affirm to be most melodious and capable of great effect. It is composed entirely of wood, and consists of a series of large tubes, made from long, gourd-shaped calabashes, of different lengths and sizes, suspended lightly in a frame of wood. A thin membrane from the viscera of some animal is drawn over the upper opening of the tubes, above each of which is a short horizontal piece of hard, sonorous wood, sustained at each end on a tense cord. The sound is produced by dextrously striking on these hor-

izontal bars of wood with strips of cane, pointed with a compact ball of India-rubber. Some of these instruments have as many as twenty-two tubes, forming three complete octaves, without the half tones. The *marimba* is never silent in Flores, where it has developed a considerable taste in music, and is played with feeling and skill. There are other instruments in use, a kind of mandoline, and a variety of native flute called *chirimiya*.

The district, though remote and isolated, is nevertheless traversed by four great roads, or rather paths of communication, which, starting from Flores, radiate to the four points of the compass. That to the north leads to Campeachy and Merida, 163 leagues; that to the east conducts, by way of the River Mopan, to Belize, 44 leagues; that to the south across the mountains of Cajabon to Coban and Guatemala, 156 leagues; and that to the west to the Rio Usumasinta and Tabasco, 152 leagues. The road to Campeachy intersects numerous little towns, and is less deserted than that to Tabasco, and may be traversed in sixteen days. It may be observed here that the district of Peten penetrates like a wedge northward far into the heart of Yucatan; Nohbecan, the last town in its jurisdiction, being more than half way between Flores and Campeachy.

Some notion may be formed of the profound ignorance which prevails in Peten on all matters of geography, from the circumstance that, although a large expedition was fitted out there against the English establishment at Belize, under the orders of the authorities of Yucatan and Guatemala, in 1754, yet the remembrance of it was so entirely lost that when, in 1810, some adventurous hunters came upon the mahogany estab-

lishments of the English on the River Mopan, or Belize, the existence of the English on the coast was proclaimed as a discovery! After that event a path was opened in that direction, so that the first English *bank*, or wood-cutting establishment, may now be reached in six days from Flores. It is reported by M. Morelet, as an interesting fact bearing on the development of the country, that there intervene but three days' journey, over a favorable country, from the point where navigation ceases on the Mopan, or Belize River, to where it commences on the San Pedro, a principal affluent of the Usumasinta. The navigable waters of the San Pedro, it is said, approach within three leagues of Lake Peten; but upon that point it does not appear that M. Morelet obtained any personal intelligence.

Among the animals found in the forests of Peten, the jaguar (*tigre*) and tapir (*dante*) are held by the inhabitants, as indeed by all the Indians of the great Tzendal and Maya stocks, in superstitious reverence. Both figured mysteriously in the religious rites and historical legends of the ancient inhabitants. Besides these, M. Morelet (whose tastes led him to pay great attention to all objects of natural history) mentions a great variety of animals, birds, and reptiles, some of which are new and interesting, but which can not be described here.

It is to be regretted that no opportunity was afforded to M. Morelet of examining the ancient monuments which are known to exist in the district of Peten. Besides various remains on the islands in Lake Yaxhaa, he heard of others in the neighborhood of San José, in the midst of the forest, consisting of three edifices, ornamented with sculptures in high relief, analogous to those of Palenque. The inhabitants of San José,

descendants of the ancient *Coboxes*, regard them with reverence, and watch over them with jealous care. All vestiges of the great edifices which existed on the site of Flores, described by Cortez and the Conquerors, have entirely disappeared. Only a few figures in burnt clay remain as evidences of an anterior civilization. M. Morelet expresses the opinion, in which I fully concur, that very few aboriginal establishments were made in the district of Peten, and that the branch of the ancient Mayas which migrated thither, although brave and warlike, was small and weak as compared with the powerful families and tribes of the same race in Guatemala, Chiapas, and Yucatan. It is doubtful if any monuments of note exist in the district, except on the islands, or in the immediate neighborhood of the lakes already named.

Colonel Galindo, an officer of the old Republic of Central America, visited Flores in the year 1831, and has left us some account of the monuments in Lake Yaxhaa. He describes this lake as being six miles in length, containing four small islands; one high above the water, and covered with sculptured stones. On it is a square tower of five stages or stories, each nine feet high. The lowest is twenty-two feet square, and each superior one recedes two feet on every side, so that the fifth or superior stage is but ten feet square. There appears neither entrance nor window in any of the first four stages, but on the fifth stage are two low doors, one on the western, the other on the eastern side, which a man can enter only on his hands and knees. There is a flight of steps, seven feet broad, leading up to the western opening. This upper story contains three inner apartments, without roofs. The stones which compose the structure, Galindo affirms, are of

the same shape, but of larger size than those found at Palenque, and the whole is less corroded by time, and appears of a later date. But, while wooden lintels, etc., are found at Palenque, here all traces of wood have disappeared.

Upon the separation of the colonies from Spain, Mexico set up some pretensions over the northern part, at least, of the Department of Vera Paz, including the district of Peten Itza, and in 1827 sent thither a commissioner, Don Domingo Fajardo, to investigate the claims of Central America over it.* He was also instructed to inquire into the nature of the British claim over Belize. Fajardo attempted to go to Peten, but was met by the Central American authorities and turned back. He nevertheless obtained some interesting information respecting the country, which he has transmitted to us in language not the most exact or elegant, but which bears every mark of veracity. Of the Lake of Peten he says:

“This lake has no outlet to the sea, nor does any stream fall into it, although there are rivers flowing near it. The River San Pedro comes within three leagues, but, for want of facilities, it has never been explored to see how far upward it is navigable from its junction with the principal river (Usumasinta).”

He adds that the district of Peten, from east to west,

* Informe del Señor Don Domingo Fajardo, dirigido al Gobierno Supremo de Mexico. Campeche, 1828.

In this pamphlet Fajardo sums up the alleged rights of Mexico over Peten Itza in a series of articles, number three of which is as follows:

“ART. 3. The Itzæ, who people the capital island, as well as the Coboxes and other families of Indians who people the country as far as the town of San Luis, were originally from Chichen Itza, in the centre of Yucatan. Their kindred (*acendientes*) exist in that state; there are also their monuments, which, not less than their Yucatan language and customs, indicate their origin and relationship. Their friendly intercourse and commerce have not been interrupted up to this hour.”

and even as far northward as the Usumasinta and the confines of Chiapa, a distance of from seventy to eighty leagues, is plain and destitute of mountains. The mountains of Chisac and Cajabon (or Chama), which lie about half way between the lake and the city of Guatemala, and which separate the head waters of the Polochoc and Usumasinta Rivers, he describes as high and abrupt, and only "comparable to the wall which separates the Chinese from the Tartars. The roads over them are impassable for animals, and in two places interrupted by cliffs which can only be ascended by the aid of the notched trunks of trees." The district which intervenes between the Rio Isabal (the upper or main branch of the Rio de la Pasion, itself the principal source of the Usumasinta) and the mountains of Cajabon, on the road to Guatemala, he affirms, is full of lakes, which at all seasons require to be passed by means of rafts. During the season of rains, these lakes, he adds, spread out so as literally to cover vast tracts of country, sometimes extending for a distance of three days' journey. He describes the island of Peten as only a quarter of a league in diameter, containing, previous to the Independence, 2000 inhabitants, reduced, at the time he wrote, to but little over 1000. The Rio de la Pasion, according to his account, is eighteen leagues from the valley Peten, going S.S. W. on the road to Guatemala. From this river to the mountains of Chisac (a continuation of those of Cajabon) is fifteen leagues, or thirty-three leagues from Peten. As illustrating the extent northward of the jurisdiction claimed by the district of Peten, he mentions that the last town therein, in that direction, is so near Campeachy and Bacalar that its inhabitants can hear the cannons fired in those two places. As Bac-

alar, however, is on the eastern, and Campeachy on the western coast of the peninsula of Yucatan, this statement must be taken as somewhat apocryphal.

According to the chronicles of Yucatan, the ancient feudal monarchy, which had existed in that country for a long period, suffered a disruption in the year 1420, when the capital, Mayapan, was destroyed by a coalition of rebellious chiefs. In consequence of this disruption, but for what special reasons does not appear, the powerful *Canek*, or chief of the Itzæes, migrated, at the head of his followers, to the southward, and, after having wandered about in the intervening solitudes for many years, finally reached the Lake of Itza, to which was given the name of *Chultuna*. Charmed by its beauty, and gratified with the security which its islands seemed to offer, he established himself on the largest island, and gave it the name of Tayasal—*Peten*, in the Maya language, signifying simply island. The colony prospered to such a degree that, according to the chroniclers, two hundred and seventy-seven years thereafter it numbered twenty-five thousand inhabitants on the islands, besides a large population distributed along the shores of the lake and scattered through the adjacent country. Cortez reached the retreat of the Itzæes in his famous march overland from Mexico to Honduras in 1525, and has left us an account of its powerful chief and his island capital. The *Canek* had heard of the arrival of the Spaniards on the coast, and, it appears, received them kindly. They, however, remained here but a short time, and then pursued their journey to the southward. A singular incident connected with the visit of Cortez deserves mention. One of his horses falling lame, he left it in the care of the chief. From some fancied resemblance to the sacred

dante, or tapir, the Itzæes called the animal *Tziminchac*, or the white tapir, and treated it with high honors. They gave it birds and flowers to eat, upon which regimen, as may be supposed, it speedily died. Its loss threw the chief and his people into great consternation. They had its image reproduced in their principal temple, and preserved its bones in the inmost sanctuary, where they were found, nearly two centuries later, on the reduction of the Itzæes, by Manuel de Ursua in 1697.

Destitute of the precious metals, and remote from the sea, the Itzæes were suffered to retain their isolation and preserve their independence for a long period after the entire subjugation of the principal provinces of Central America and Yucatan. A visit was made to them by the Franciscan missionaries in 1618. They were very courteously received, and allowed to explain the object of their coming. But the *Canek* informed them that the time had not yet arrived for his people to change their religion, and the priests were promptly sent back to Merida. This circumstance, and the fact that the Itzæes were concerned with the implacable Lacandon^{es} in their repeated bloody attacks on the Christianized Indians and settlements of Tabasco and Lower Vera Paz, led to various efforts to reduce them on the part of the governors of Guatemala and Yucatan. In 1662, a Captain Mirones, at the head of a small force from Merida, succeeded in reaching the lake. The priests who accompanied him sailed boldly for the island. No sooner had they landed than they were seized and sacrificed in the great temple. Mirones, retreating, was overtaken, and his whole force destroyed. Two expeditions were planned in Guatemala in 1695 and 1696. The advance guard of one of these, under Captain Velasco, penetrated to the lake, but his temerity cost him

his life and the lives of his companions. This event so discouraged the other commanders that the expeditions were abandoned. The Itzæes, grown bold with success, became more and more aggressive, and with the Lacandones, their allies, became the terror of the frontier Spanish provinces. At this period a Spanish gentleman of Merida, Don Manuel de Ursua by name, conceived a project for punishing their insolence and effecting their conquest. He secured the favor of the crown, and in 1697 started from Campeachy, at the head of a considerable force, well equipped, and determined on victory. In due time he reached the lake, and at once built a large boat to be used in reaching the island on which the capital was built. He next made some attempts at conciliation, which were haughtily repulsed by the Indians. Ursua was a man of decision, and, without loss of time, planted his artillery on the lake so as to play upon the town, and with a hundred and eight good men embarked in his *goléa*, and advanced on the island. He was vigorously assailed, but, moving steadily to the shore, with the aid of his guns and arquebuses, and the assistance of St. Paul, whose picture miraculously appeared on the surface of the water, he drove the Indians from their defenses in confusion and dismay. Many attempted to escape to the main land, but were drowned in the effort. "Nothing was to be seen on the lake," says the chronicler, "but the heads of men, women, and boys, all swimming away as fast as possible." Ursua planted his flag on the summit of the great temple, and proceeded to name the island "Nuestra Señora de los Remedios," calling the city itself by the name of St. Paul, in consequence of the miracle above recounted. His next proceeding was to destroy the temples and the idols, the

altars, and vessels of sacrifice which could be found in the private dwellings, all of which were burnt or broken in pieces. "To give some idea," says the chronicler Villagutierre, "of the number of idols and statues which were reduced to ashes, it will be sufficient to say that the island was taken at half past eight in the morning, and that the work of destruction lasted until half past five in the afternoon, when the troops were recalled so as to get their dinner, of which they stood in great need after such hard work." After the reduction of the capital of the Itzæ, the subjugation of their other towns followed rapidly. Some of these were wholly destroyed, and but few entirely escaped the fury and zeal of the invaders, and of the priests which followed in their train. The latter directed their iconoclastic fury especially against the temples, idols, and altars of the Indians, and with so much effect that not a trace remains of the religious edifices which crowned the island of Tayasal. It is not surprising, therefore, that so few remnants of aboriginal art are to be found around Lake Itza; indeed, it is rather remarkable that any were left, even in remote localities, to attest, in modern times, the accuracy of those ancient chronicles which speak so often of the "vast structures of hewn stones" in which the infidels adored their false gods and paid their bloody sacrifices.

There is no doubt of the truth of the tradition recorded by the chroniclers, that the Itzæ were colonists from the seats of the Mayas in Yucatan; and there are many reasons for believing that they had not been long established around the lake to which they gave their name at the period of the Conquest. They speak, and still retain, the Maya language, but they appear to have been less polished and more warlike than their

ancestors. Even their principal city, according to Vilagutierre, was composed of houses placed without order, built of stones to the height of three feet, continued with wood, and covered with thatch. In their interiors these houses were filthy and unswept, and their occupants lived promiscuously, and in a very brutal way. In character, continues the chronicler, they were sagacious, but deceitful, ferocious, and cruel; and although the people of Yucatan did not eat human flesh, yet the Itzæ, after their migration, soon fell into the barbarous practice; for there was not a prisoner that they took in war which they did not sacrifice and devour. They had good countenances, a ruddy-brown complexion, were well made, agile, and courageous. They wore their hair very long, dressed in robes of cotton cloth of bright colors, and decorated themselves with the feathers of the *guacamalla* and *quetzal*. They were industrious, applying themselves to their labors from sunrise to sunset, cultivating, besides the maize and other necessary fruits and vegetables, cotton, indigo, cochineal, achiote, etc.

Ursua found not less than twenty-one *cues* or temples on the island Tayasal. The largest, in which the high priest officiated, was twenty yards square and very high, with a handsome parapet, approached by nine steps of beautiful stones. On the upper step, or platform by the entrance, was an idol in human form, in a crouching posture; and in the temple itself was another idol of unwrought emerald, a span long, which Ursua appropriated to himself.* There was still another

* This was, without doubt, one of the *chalchihuites*, or sacred green stones, *madre de esmeralda*, or mother of the emerald, each one of which was declared by Montezuma, when presenting some of them to Cortez, to be worth ten loads of gold. I have several, one of them nearly "a span long," elaborately carved in relief with the figure of *Cuculcan*, or *Quetzalcoatl*, the Buddha of the Tzendal and Nahuatl nations.

of gypsum, with a face set with mother-of-pearl, forming an image of the sun. The *Canek* or chief had also a special temple in which to pay his adorations, in which was a great stone for sacrifices, and a number of idols in stone. Here were preserved the *analtches*, or painted records of the nation.

Colonel Galindo, when in Flores in 1832, obtained, through the Prefect Bæzo, a vocabulary of the dialect spoken by the natives, which, with the corresponding Maya and Kachiquel words, drawn from original MSS. in my possession, is reproduced below. It will be observed that the language of Peten is the true Maya.

English.	Peten.	Maya.	Kachiquel.
sun,	kin,	kin,	eih.
moon,	vh,	————	ytz.
stars,	ek,	ek,	tzhumil.
light,	sasil,	cacil,	cak.
thunder,	humcaan.	————	————
lightning,	lemba,	lembacaan,	coyopa.
darkness,	ekhoher,	————	eekum.
fire,	kak,	kak,	cac.
cold,	ceel,	ceel,	teuh.
earth,	luum,	lum,	vleuh.
tree,	che,	che,	che.
house,	na,	na,	hay.
town,	cah,	cah,	tinamit, gahol.
road,	ve,	bey,	bey.
water,	haa,	haa,	ya.
sea,	kanab,	kaknab.	————
man,	xib,	vinic,	ruvach.
woman,	chup,	chupal,	alom.
Indian,	maseval (?),	————	macegual (?).
father,	lum,	yum,	nutat.
mother,	ná,	naa,	nute.
snake,	can, pech,	can,	cumatz.
tiger,	chacmal,	balaam,	balam.

English.	Peten.	Maya.	Kachiquel.
tapir (dante),	ziminche,	_____	tixl.
small,	chichen,	chancha.	_____
white,	sasak,	cacac,	cak.
black,	eek,	eek,	eek.
red,	chechac,	chachac,	eak.
yellow,	kankan,	kankan,	can.
blue,	yayax,	yaxcab,	rax.
green,	yaxichn,	yayaax,	rax.
beautiful,	cichcelm,	chichpam,	chaom.
ugly,	kas,	_____	tivachim.
much,	yab,	pintuba,	etziy.
little,	sesec,	_____	tzhutin.
to jump,	sit.	_____	_____
“ dance,	ukot,	okot,	quixaho.
“ eat,	hanal,	hanal,	quiva.
“ drink,	ukul,	ukul,	quinutzia.
“ hear,	vyah,	_____	quinzaxan.
“ see,	ilah,	ilmah,	quitzeton.
“ die,	cimil,	_____	quicam.

CHAPTER XXV.

THE UNCONQUERED INDIANS — LACANDONES — MANCHES —
CHOLES, ETC. — ATTEMPTS TO SUBDUE THEM — THEIR
CHARACTER AND HABITS.

AMONG the existing nations of the great primitive Tzendal stock, the Lacandones deserve a special consideration. Their relative geographical position has already been defined. But little is known of their country, except that it is mountainous, traversed by large rivers, and consequently difficult of access. These circumstances, joined with their own naturally indomitable spirit, have enabled them to maintain their independence to this hour. They have successfully resisted every attempt at reduction, and, although now nominally within the political jurisdiction of Guatemala, they still retain their primitive systems of government and religion.*

The first mention which is made of the Lacandones in the early chronicles is in the accounts of the famous expedition made by Cortez from Mexico to Honduras in the year 1524. He passed through the districts of

* Their relations with their Spanish neighbors may be inferred from the terms of a treaty made with the "Manches" (according to Marure, "the principal tribe of the Lacandones") by the government of Guatemala in 1837. The treaty stipulated that they should be regarded as beneath the protection of the government of Central America, but with the distinct understanding that they were not to be subject to the laws of the republic until the expiration of seven years, and with the further strict stipulation that there should be no change in their religion, nor interference with their practice of polygamy! A previous attempt was made, in 1831, to incorporate the Lacandones in the republic, but without success; nor does it appear that the treaty of 1837 was ever carried into effect. — *Marure, Efemerides de Hechos Notables en Centro America, etc.*, p. 39.

Acala and of *Itza*, lying to the northward and eastward of the Lacandones, and saw many of their towns in the distance, although he visited none of them, as they fell to the right of the course which he was pursuing. Upon entering the district of *Acala*, he came upon a town which had been recently built, and which was strongly defended by palisades. The inhabitants informed him that they had just established themselves there, in consequence of the attacks of the Lacandones, who had destroyed two of their towns situated in the plain country, and slaughtered numbers of their people. These fugitives called themselves *Macotecas*. Cortez afterward came upon the ruins of the towns which had been burned by the Lacandones.*

This circumstance gives an indication of the character of the Lacandones, which every subsequent event in connection with them serves to confirm. In his enumeration of the various nations having their seats between Guatemala and Yucatan, Pinelo speaks of them as the "fiercest and most barbarous." By the latter term, however, we are to understand that they were warlike and cruel, rather than savage or deficient in agriculture and the arts; for it will appear as we proceed that their civilization was identical with that of the more celebrated nations of Yucatan and Guatemala.

Like the Itzæxes or Itzæes, they had their capital or principal stronghold on an island in a lake, "from whence," says Pinelo, "they made sudden incursions on their neighbors, going and coming with the greatest celerity."

This island was captured by an expedition which entered the country of the Lacandones in 1558, under

* Leon Pinelo, *Relacion*, p. 3.

the *Licenciado* Pedro Ramirez de Quiñones. It is described as a high rock, surrounded by several smaller ones, on which the town was built, and so bare of earth that there was not soil enough for the burial of the dead, who were, in consequence, thrown into the lake.* The town, according to the same authority, was imposing; the houses white, large, and well built, and protected by walls of defense. The lands around the lake were highly cultivated, as appears from the references which are made by Villagutierre to "great fields of maize," surrounded by fences and deep ditches, which the Spanish horsemen found it impossible to leap.

From the accounts which have been preserved of this expedition, it appears further that the Lacandones, in common with the Itzæxes, were addicted to human sacrifices. They captured a negro boy belonging to Juan de Guzman, the camp-master, whom they immediately threw on the ground, opened his breast with a sharp knife, and, tearing out his heart, offered it as a sacrifice to the sun. No idols were found in their temples; for, unlike the other tribes whom the Spaniards had met, they confined their adoration to the sun, and made their offerings and sacrifices before it, in its actual presence.

The expedition of Quiñones, here referred to, seems to have been the first which was undertaken against the Lacandones. They had previously made themselves very troublesome by their bold irruptions on the Christian districts, and especially on Vera Paz. But

* Villagutierre, lib. i., cap. 2. This author relates that "from feeding on the bodies thus buried in the lake, the fish become very large, especially the turtles; but, during the whole of their stay, the Spaniards would not touch them, so disgusted were they with the nature of the food which produced such plump and savory creatures." The Indian auxiliaries, however, had no such scruples, and ate of them freely.

their territory was understood to be comprehended in the limits which, at the instance of the celebrated Las Casas, had been assigned to the charge of the Dominicans, and within which all armed interference with the Indians had been strictly forbidden. The governors of Guatemala, therefore, were restrained from attempting to punish the Lacandones, as also from undertaking their reduction by force. They were consequently left to continue their outrages, without any opposition from the civil arm.

Grown insolent from impunity, they no longer confined themselves to assaults upon the frontier towns, but boldly penetrated into the heart of the Christian districts. In 1552 they advanced to within fifteen leagues of Chiapa, where they destroyed not less than fifteen towns and villages, killing and capturing many of the inhabitants. Some of these they sacrificed on the altars of the churches and at the feet of the crosses, demanding ironically of their victims "to call upon their God to save them." The Bishop of Chiapa (the Fray Tomas de Casillas), roused to adopt measures of self-defense, collected together a number of men, and hastened to the succor of the suffering towns. He boldly followed the Lacandones within the confines of their own territories, fifty leagues from Chiapa, and there made a requisition for peace. But the Indians treated his demand with contempt, and killed his messenger. He therefore retired to Chiapa, where he addressed an urgent letter to the members of the Audiencia, calling upon them to protect their Christian vassals and punish their assailants. But the Audiencia declined to interfere, on the ground that "his majesty had commanded that war should not be made on the Indians of Lacandon and Puchutla."

The excesses of the Lacandones and their allies in Vera Paz, if possible, surpassed those which they had committed in Chiapa; and the sufferings and complaints of the people finally reached the ears of the Council of the Indies. The king, in consequence, in 1553, made them the subject of a cedula, directed to the Audiencia of the Confines, enjoining upon it to adopt measures for the protection of the Christian Indians, and for the reduction and pacification of their enemies. But the Audiencia, offended by the cedula, which had practically excluded Vera Paz (and with it Lacandon) from their authority, contented itself with sending this document to the Dominicans, thereby intending to reprove their pretensions of the superiority of the Gospel over the sword in the reduction and conversion of the Indians. But the Dominicans, so far from being able to check the insolent Lacandones, found that their own converts, in the districts bordering on the unreclaimed territories, were rapidly apostatizing, and that their position in Vera Paz was fast becoming untenable. The Lacandones carried their incursions to the north, as well as to the west and south. A few towns of Acalan, lying between them and the Laguna de Xicalanco, had received the missionaries and accepted the Christian religion; hereupon the remainder of the tribe determined to destroy the converts, and to this end called in the warlike Lacandones to their aid. Jointly, they not only destroyed the towns and slaughtered their inhabitants, but also killed the Spanish missionaries, and upward of thirty Christian Indians, who had accompanied them from Vera Paz. This act was followed up by a descent of the Lacandones and Puchutlas on Vera Paz itself, where they committed the greatest excesses, returning with many prisoners laden with rich booty.

The attention of the Council of the Indies was again arrested by these proceedings, and the king directed another cedula to the Audiencia, dated January 22, 1556, requiring its immediate attention to the circumstances, and repeating the instructions contained in that of 1553. But the pertinacious Audiencia again contented itself with commending the matter to the Dominicans. The latter, however, were no longer in a condition to sustain an attitude of independence toward the Audiencia. Their existence in Vera Paz had now become precarious, and the very name of the Lacandones carried terror before it. They accordingly met in grand conclave, in the year 1558, to consider the question if, under the circumstances of the case, it were proper to make war on the Lacandones, and to reduce them by force of arms. The result, in the language of Pinelo, was a unanimous resolution "that it was the duty of his majesty not only to defend his Christian vassals from these Indians, but to make war upon them, and totally exterminate them; not so much on account of their infidelity and alleged cannibalism, as because they had burnt many churches, broken the images of the saints, and sacrificed the children of the Christians on the altars and at the feet of the crosses." This resolution, which involved a complete abandonment of the principles upon which the Dominicans had undertaken the conversion of Vera Paz, was followed in the same year by a royal cedula, which ordered that the Lacandones and Puchutlas should, if possible, be removed from their territories, and transferred to certain vacant districts beyond Chiapa. But if this should be found impossible, it authorized a general war to be made upon them, and the reduction to slavery of all captives who might be taken by the Spaniards.

In conformity with this cedula, and, as quaintly observed by Villagutierre, "not less out of zeal for Christianity than in the hope of obtaining the reward which his majesty offered," great preparations were made for an expedition against the Lacandones, which was put under the command of the Oidor of Guatemala, Pedro Ramirez de Quiñones, who had won distinction in the wars against Gonzales Pizarro in Peru. The actual force under Quiñones is not known, but it must have been large. Pinelo states that it was composed of "a large number of Spaniards and more than 2000 friendly Indians." They were well equipped, and took with them two large boats (*bergantines*), in pieces, to be used in attacking the stronghold of the Lacandones, in the lake of the same name.

The result of this expedition was the capture and destruction of the capital of the Lacandones, as stated in a previous paragraph. The principal town of the Puchutlas, which, like that of Lacandon, was situated on an island in a small lake, was also destroyed. Don Juan, chief of the Indian auxiliaries of Vera Paz, at the same time advanced into Acalan to avenge the murder of his own people and the missionaries, where he was very successful, capturing, according to Pine-lo, not less than two hundred and forty prisoners, of whom he hung eighty. Upward of two hundred of the Lacandones and Puchutlas were taken by Quiñones, yet one by one they all speedily effected their escape. But, although the expedition was victorious at every step, it was fruitless in any decisive result, and returned without either slaves or spoils.* The

* "The spoils of the war," says Villagutierre, "amounted to nothing. * * * Many of the gentlemen who engaged in it were rewarded with crosses and honors, but the greater part of them had spent so much money in finery and orna-

chastisement which it had inflicted on the arrogant Lacandones nevertheless had the effect to keep them quiet for some years, during which time they gave no trouble to the neighboring provinces. The Lacandones, however, as well as the Puchutlas, returned to their ruined strongholds, which they hastened to rebuild.

The Puchutlas were soon after visited by the Friar Pedro Laurencio, and, although he was speedily obliged to fly, his mission was not without result. Under the influence of their chief, *Canagual*, they were induced not only to make peace with the people of Chiapa, but to abandon their country and to take up their abode near Ocosingo. "If any of them remained in Puchutla," says Pinelo, writing in 1639, "we have now no account of them." Their original seat was visited by Colonel Galindo in 1831, where he found extensive ruins; among them a tower of five stages, and several other considerable edifices.

They nevertheless rebuilt their stronghold, and before the close of the century became as daring and troublesome as ever. They so disturbed the province of Vera Paz as to induce the suppression of the bishopric of the same name, which had been established, with its seat in Coban, in the year 1559. It was merged in that of Guatemala in 1609, after having existed for half a century.

From the time that the Lacandones resumed their system of hostilities until 1639, numerous royal cédulas were issued to the viceroys and governors of Guatemala and Yucatan, enjoining the conquest and pacification of the hostile Indians. But, although many

ments, bright arms and accoutrements, that they contracted considerable debts, and left their houses and estates involved for several years, and it is doubtful if they are yet free!"

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propositions to that end were made to the Council of the Indies, nothing of importance or permanence was effected. From 1608, however, some advances were made in the conversion of the Manches; a considerable number of towns were organized by the missionaries, and hopes were entertained of the speedy reduction of those Indians. But in 1626, the Lacandones made a sudden irruption, not only penetrating into the territories of the Manches, but actually to within six leagues of Coban, taking many of the Christian Indians prisoners, and sacrificing some of them on the spot. The Itzæes also invaded Manche, and, after killing many of the chiefs (including Martin Cuc, governor of the province), carried off more than three hundred of the people prisoners. The Manches, finding themselves unprotected, threw off their allegiance and religion, and relapsed into their original practices. An attempt was made in 1631 to found a Spanish town in some favorable part of their province for its protection and that of the road from Guatemala to Yucatan. Great inducements were held out to settlers, and it was finally established under the name of Torre de Acuna; but, being menaced by a large body of hostile Indians, under the leadership of the mischievous Lacandones, it was speedily abandoned. In 1639, a proposition was made to the Council of the Indies by Don Diego de Vera Ordoñez de Villaquiran, Captain of Infantry, retired Alguazil, Mayor of the Inquisition at Barcelona, and then in the possession of the encomienda of Mita, in Guatemala, to undertake, at his own expense, the conquest and pacification of the warlike Indians who occupied the country bounded by the provinces of Vera Paz, Guatemala, Chiapa, and Yucatan. It was upon this proposition that Antonio de Leon Pinelo, "Relator to

the Council," made the report, to which reference has been so frequently made. He gave a succinct description of the country in question, and recommended the settlement of some district near its centre, which might have a commanding position as a means of securing its pacification and obedience, as well as of increasing the wealth and commerce of the adjoining provinces. The Council, acting upon his recommendation, agreed to the proposition of Villaquiran, and the title of governor and captain-general of the prospective province, which was to be called "El Prospero," was conferred upon him, coupled, nevertheless, with a variety of stipulations, among which was one that he should pay "one hundred and fifty double silver ducats into the treasury of Guatemala!"

Villaquiran arrived in Yucatan in 1645 to prosecute his enterprise. It seems that he proposed to commence his establishment from the side of Campeachy and Tabasco, and to make the first settlement to the north of the Lacandones, and between the Acalanes and Tzendales. The attempt, however, failed entirely, and Villaquiran himself died in Yucatan in the year 1648.*

After Villaquiran, a similar proposition was made by De Caldas, President of the Audiencia of Guatemala,

* The Bishop Pelaez quotes some circumstances connected with this expedition from the MS. chronicle of Valenzuela, and speaks of it in an undisguised tone of contempt. "Don Diego Ordeñez de Villaquiran, Corregidor of Chiapa, obtained the royal cedula for the discovery and conquest of Lacandon, with the title of adelantado. He entered by way of Ocosingo, with many Spaniards and 600 Indians of Chiapa (as stated by Valenzuela in his MS.), and, after advancing a day and a half, halted and formed his troops, and with the sound of drum published a proclamation, offering a general pardon to the Indians of the forests if, within a brief space of time, they should render him obedience as the representative of his majesty; but that, if they did not do so, he proclaimed against them a war of fire and blood. In token of all this, he ordered four lances to be launched to the four quarters of the world. But, as the Indians of the forests did not appear, he was fain to march back again."

who offered to deposit beforehand thirty thousand dollars to defray the cost of the enterprise, only stipulating that, in the event of success, it should forever bear the name of Province de Caldas. After him, Don Juan de Mendoza, at the instance of a Captain Escoto, who had achieved some distinction in the "pacification" of Tegucigalpa, in Honduras, made propositions to the same end, and, being supported by the Audiencia, the king, by cedula dated November, 1692, ordered the invasion of Lacandon by the three points which had been previously indicated, viz., Chiapa, Gueguetenango (in Guatemala), and Vera Paz. The forces were to be preceded by the priests, and not to make war except in case the Indians refused to hear and obey the missionaries.

But the president of the Audiencia, Barrios Leal, claimed the right of giving effect to the cedula. It was not, however, until 1695 that the preparations for the enterprise were completed. Barrios headed the expedition which started from Chiapa, while Melchor Rodriguez Mazariegos led that from Gueguetenango, and Diego de Velasco that from Cajabon. Sobrinos, the governor of Yucatan, was also invited to aid in the enterprise.

As the expedition of Velasquez was confined to the territories of the Itzæes, it does not require to be noticed in this connection. The divisions of Barrios and Mazariegos, however, both reached the district of the Lacandones. The former started from Ocosingo, and the latter from Istatan, on the 29th of February, 1695.

The course of Mazariegos was in the direction of the mountains toward the northeast. His progress, however, owing to the ruggedness of the ground, was slow and difficult. At a distance of five leagues from Istatan he came upon the ruins of some ancient edifices of

stone, skillfully put together; but what purpose they had served could not be ascertained, as the walls that remained rose little higher than a yard above the ground, and they were, moreover, overgrown with trees. On their second day out they arrived at a place which Father Ribas had visited in 1685, called by the Indians, Labconop, and by the priest, San Pedro Nolasco. On the sixth day they came to a great opening in the mountains, more than a league wide, in which was a small lake, and the ruins of more buildings. The force finally found some traces of the Indians, consisting of "tapesquillos," or fire-places, where fish and other food had been dressed, and soon after they came upon a narrow path and a hut. The path led to a town, situated in a plain, which, as it was discovered on Good Friday (April 6, 1695), was called Los Dolores. One of the priests went forward and boldly entered the town, where he was received with demonstrations of surprise and some tokens of hostility. Meantime the force moved forward, and, encountering a body of the Lacandones, made certain demonstrations of hostility. The Indians, seeing this, cried out repeatedly, "*utz impusical! utz impusical!*" my heart is good! my heart is good! to signify that their intentions were not evil. Next day the Spaniards entered the town, but the Indians had fled, taking with them most of their lighter movables.

The Bishop Pelaez has given an account of the march of Mazariegos, drawn from the MS. of Valenzuela, which throws considerable light on the habits and arts of the Lacandones.

"Captain Melchor Rodriguez Mazariegos started from Gueguetenango on the same day (28th of February), and penetrated the country, but found only deserts

(lands without inhabitants), even where, a century and a half before, the Indians had disputed the passage with Quñones. At the expiration of a month he found some tracks of men, and, following the traces, on the 9th of April reached the lake and town of Lacandon, before called Puchutla, which he found abandoned. He sent in all directions in search of the fugitives, and finally succeeded in discovering a number of families and caciques, amounting to upward of three hundred persons.

“In Lacandon, which the Spaniards called the town of Dolores (according to Valenzuela, cap. 29), they found one hundred and three houses, better constructed and of better appearance than those of the Indian towns under the Spanish jurisdiction. Three of these, in the centre of the town, were of extraordinary capacity, and designed for common use. One served as a temple, one for the meetings (*juntas*) of the women, and the other for the meetings of the men. All were inclosed with stakes of wood, well adjusted, whitened, and varnished, so that it was impossible to distinguish the joints by the touch. In the middle of the temple was a place, closed by a door, within which none could enter but the priest. In it was a pedestal (*peana*) of clay, and on it two vases or braziers (*macetas*), also of clay, a yard in height, carved and painted with different colors, and having traces within of the blood of birds which had been sacrificed. There were also dresses (*trages*) of cotton cloth, of various colors, with cords and tassels hanging from them at their corners; jackets (*jubones*) wherein to dance, which had skirts, but no sleeves; *maniples*, with cords and tassels, which the women wore on their wrists; as also *tepananguastes*, flutes, and other instruments of music. In the

hall for meetings there were more than two hundred suspended seats (*tablas colgadas*) whereon to sit. The other houses had their gardens, in which were pine-apples, potatoes, plantains, and a variety of other fruits and vegetables; also pens containing fowls of the country and of Europe; as also dogs and tame *guacamallas* (large parrots). In the adjacent country were wide fields of maize, beans, and *chili* (peppers), which were taken by the Spaniards, in order that they might not be of service to the fugitives. Among their working utensils were chisels and hatchets of stone, and instruments for weaving, and fashioning their pots and pans. They twisted their cigars, which they called *puquiet*, in leaves of the *nance*, and made fire from the friction of bark, fixed in a machine for the purpose. The cradles for their children were made of reeds. And," continues Valenzuela, "although the climate of their country is hot, they were more industrious than the converted Indians. The education of their children consisted in instructing them in the appropriate labors of their sex necessary for their support. They recognized various caciques, viz., Cabnal, Tuxnol, Tuxtecat, Buban, Sulabnachichel, Tzatzí, Quin, Chaucut, and Polon."

The force under the direct command of Barrios pursued the course which had been indicated at the outset. They encountered great sufferings, and prosecuted their march with infinite labor. The country was rough, thickly wooded, and without inhabitants. But on the 30th of March they reached a great lake, where they discovered four Indians, one of whom was captured, with the purpose of using him as a guide to Lacandon. But fortunately, at this time, they fell in with one of the scouting-parties of Mazariegos, and

marched at once to Dolores, which place they reached on the 19th of April.

Barrios, after effecting this junction, proposed to march to Itza, but was discouraged by the representations of some of the Lacandones who had been taken prisoners. They said that they had burnt all of their towns, and that the inhabitants were concealed in the woods. They spoke of a large river, a little lower down, which reached to Coban, to which point boats could go in fifteen days, but which it required eighteen days to reach by land, and furthermore stated that the Indians of Coban formerly came down the river to trade with them. Nevertheless, the president sent forward Captain Morador in the direction of Itza; but, after wandering about fruitlessly for some time, he came back, and the periodical rains now commencing, it was determined to fortify Dolores, leave a garrison there, and return to Guatemala, which was accordingly done.

Before operations could be resumed, Barrios died, and the duty of carrying out his expedition in Lacandon was assigned to Don Jacobo de Alçayaga. When he reached Dolores in 1696, he found upward of five hundred Indians concentrated there, who had been baptized or "converted." Proceeding further, he discovered two more towns of the Lacandones, called Peta and Mop, of which the former had one hundred and seventeen families, and the latter one hundred and five. The inhabitants readily yielded to the missionaries, and proposed to burn their towns and remove to Dolores. It is not known if this purpose was carried into effect. Alçayaga, supposing that no more towns of the Lacandones existed, resolved to proceed to Itza. Considering that this could be effected by descending the river

of Lacandon, he built boats and commenced his voyage. But, after having been out for seventy-five days without finding the place of which he was in search, he was obliged to abandon his expedition and return to Dolores. According to the account of Villagutierre, after descending the River Lacandon for thirty-two leagues, he came to another larger stream flowing into it, up which he went for one hundred and fifty leagues. This river was probably the San Pedro, but the distances given by this author are exaggerated. This was the end of the expedition of Alcayaga, who soon after returned to Guatemala, leaving a garrison at Dolores.

Some time after this expedition, according to Juarros, the Indian temple at Dolores was pulled down to make room for a Christian church, which so much displeased the caciques Cabnal and Tuxtecat that they returned to the mountains with their followers. However, the missionaries and soldiers of the garrison persuaded them to come back, and this, continues Juarros, "with additional numbers, since in searching for them among the mountains they found four more small villages."

The Spaniards, after various attempts at the pacification of the warlike provinces, adopted the policy of forcibly removing the Indian towns, and establishing them at points within their own undoubted jurisdictions. This policy was commenced by Barrios Leal, and followed up by the President Berrospe with great energy.

Alleging that, although the Indians of the town of Dolores were generally docile, yet that they could not safely be left without a garrison, the support of which involved considerable expense, it was resolved that the inhabitants should be removed to another place, among

the Christianized Indians. The first point to which they were removed was on the Aquespala, where they were entirely content, and built their houses and a church. But, for some unexplained reason, they were again removed to a place called San Ramon, and afterward to Santa Catarina de Retaluleu.* These changes caused great suffering and discontent; some died, others scattered themselves among the neighboring towns, but a greater part returned to their native mountains.

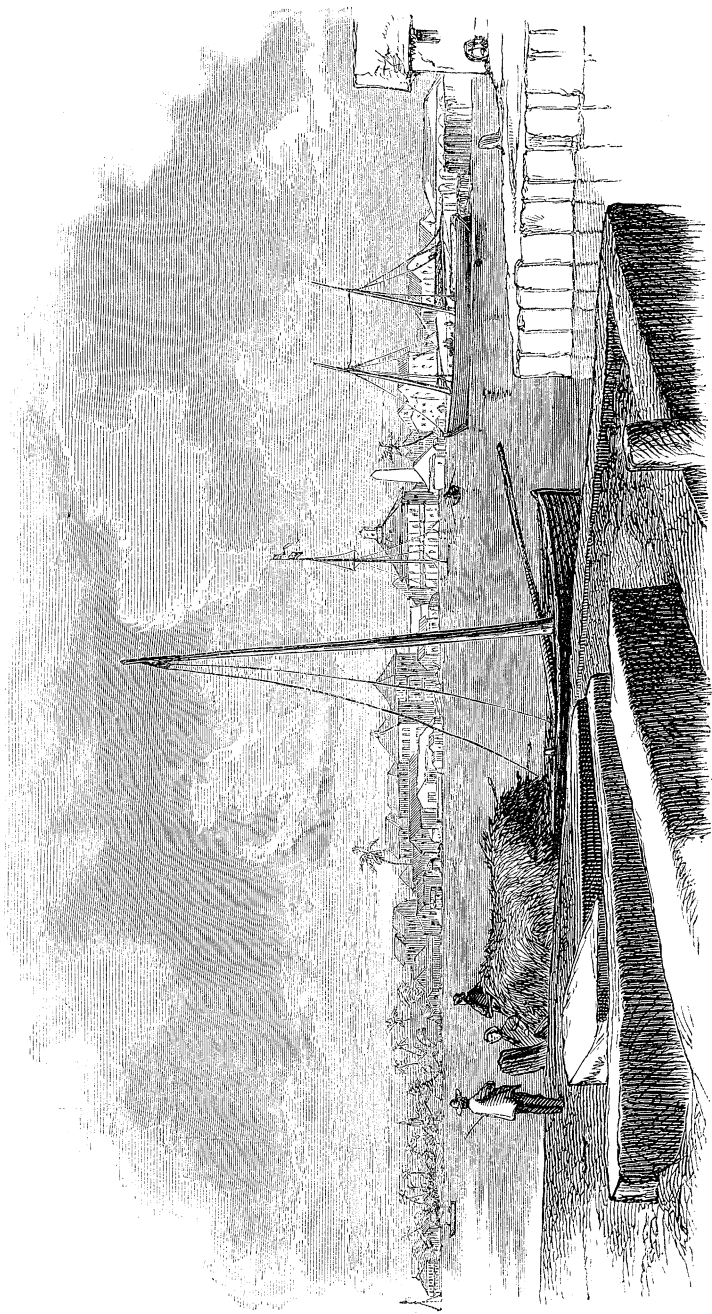
From this time forward we find no special reference to the Lacandones. It would appear that in some of the later "sublevaciones," or risings of the Indians, they expelled the Spaniards, and relapsed into their original habits and practices. It is doubtful if, as the leaders of the expedition into Lacandon represented, and the Spaniards themselves supposed, the few towns which were reduced by Barrios and his captains comprised the entire population of Lacandon. Dolores seems not to have contained more than four hundred people, and the aggregations from the other towns did not probably exceed a thousand—a number wholly inadequate to make these sudden and severe incursions on Vera Paz and Chiapa, which had kept these provinces in a state of constant alarm for nearly two centuries, and had almost led to their abandonment. According to Pinelo, the Lacandones and Manches were estimated in 1637, subsequently to the invasion of their territories by Quiñones, at 100,000.

* The Santa Catarina, or "Ixtlavican," of which two German writers (Scherzer and Von Tempsky) have given somewhat marvelous accounts, is probably the same here alluded to. The inhabitants of this town are described by these authors as now living quite isolated, rendering no service to the State of Guatemala, and practicing a religion strangely made up of heathen and Christian rites. The only whites or *Ladinos* resident in Santa Catarina are a priest and his attendants, who, after long and dangerous exertions, have acquired a great influence over the still half-barbarous inhabitants.

As has already been observed, the government of Central America, both in 1831 and 1837, made efforts to bring the Lacandones under its authority, but without success. They still retain their independence, and their country is now no better known than it was in the time of Quñones and Barrios. They seem, however, to have abandoned their predatory habits, and to have contented themselves with rigidly preserving their isolation and independence. A few occasionally enter the Spanish towns of Chiapa, Tabasco, and Campeachy, bringing down tobacco and a few other articles for sale or exchange. But, according to Waldeck, no sooner have they effected a sale, or procured what they wish, than they suddenly disappear by obscure and unknown paths. This author saw some of the Lacandones near Palenque. They possessed all the savage energy and independence of their fathers. "Their dress coincided with the garbs represented on the monuments. Their actual worship is unknown, although it is well understood that they have their hidden temples, where they practice their peculiar rites." Their asseverations are made by Ballam or Vallam, a name held in profound reverence by all the nations of the same stock. Waldeck considers that the Lacandones were anciently nomads, but there is no good ground for this supposition. From the earliest historical period they have occupied the same strongholds; and although it may be true that, with the Itzæs, they had left Yucatan after their migration, and had returned toward their native seats, yet these migrations were probably the results of political conditions, and in no way indicative of nomadic habits.

The language of the Lacandones is perhaps as little removed from the radical Tzendal as any of the numer-

ous dialects spoken in Yucatan and Guatemala. Waldeck assures us that the Lacandones speak the Maya with greater purity than the people of Yucatan, and have preserved unimpaired, in their seclusion, their primitive language and customs. The few words of their language preserved in the Spanish chronicles are identical with the Maya.



BELIZE, FROM THE LANDING.

BELIZE.

CHAPTER XXVI.

HISTORICAL SKETCH—CLIMATE—PRODUCTIONS—RESOURCES, ETC.*

BELIZE, or, as it is sometimes called, British Honduras, is an anomalous British settlement or establishment situated on the eastern coast of the peninsula of Yucatan, fronting on the Bay of Honduras, within the ancient territorial limits of Guatemala. Its name is variously derived from a famous Scotch freebooter who resorted here, named Wallace (pronounced by the Spaniards Walice or Balice), and from the French *balise*, a beacon. The last derivation is probably correct, since no doubt some signal or beacon was raised here to guide the freebooters to the common rendezvous, after they had eluded pursuit behind the dangerous reef, dotted with cays, which protects the coast of Yucatan, and through which large ships find it difficult to penetrate. Belize, or, as it is still styled in official documents, “Her Majesty’s Settlement in the Bay of Honduras,” owes its origin to the logwood-cutters, who frequented the coasts of Yucatan, Honduras, and Nicaragua after the decline of piracy in the

* A large part of the facts contained in this chapter are drawn from an able paper “On Belize, or British Honduras: its History, Trade, and natural Resources,” read by Chief Justice Temple, of Belize, before the Royal Society of Arts, January, 1857, and published in the *Journal of the Society*, vol. v., No. 217.

sea of the Antilles. Most of them had been free companions, and were well acquainted with the coast and its resources. The district was rich in dye-woods, and at once became a principal place of resort with the English cutters. Although thus industriously occupied, they so far retained their old habits as to make frequent descents on the logwood establishments of the Spaniards, and appropriate the proceeds of their labors.* The attempts of the Spaniards to expel them were generally successfully resisted. The most formidable of these was made in April, 1754, when, in consequence of the difficulty of approaching the position from the sea, owing to the numerous reefs and shoals, an expedition was organized inland, at the town of Peten, in Guatemala, consisting of 1500 men. After a long and weary march, on approaching the coast they were met by a body of 250 English and com-

* Dampier, who visited the Bay of Honduras in the year 1674, gives some amusing sketches of the proceedings of those early settlers. Speaking of the logwood trade, he says: "This trade had its rise from the decay of privateers; for, after Jamaica was well settled by the English, and a peace established with Spain, the privateers, who had hitherto lived upon plundering the Spaniards, were put to their shifts, for they had prodigally spent whatever they got, and now, wanting subsistence, were forced either to go to Petit Guavas, where the privateer trade still continued, or into the Bay of Logwood. The more industrious of them came hither; yet even these, though they could work well enough if they pleased, thought it dry business to toil at cutting wood. They were good marksmen, and so took more delight in hunting; but neither of those employments affected them so much as privateering; therefore they often made sallies out in small parties among the nearest Indian towns, where they plundered and brought away the Indian women to serve them at their huts, and sent their husbands to be sold at Jamaica; besides, they had not their drinking bouts forgot, and would still spend £30 or £40 at a sitting aboard the ships that came hither from Jamaica, carousing and firing off guns three or four days together; and though afterward many sober men came into the Bay to cut wood, yet by degrees the old standers so debauched them that they could never settle themselves under any civil government, but continued in their wickedness till the Spaniards, encouraged by their careless rioting, fell upon them, and took most of them singly in their own huts, and carried them away prisoners to Campeachy or La Vera Cruz."

pletely defeated. The logwood-cutters were not again disturbed for a number of years; and their position had become so well established, that, in the treaty between England and Spain of 1763, the former power, while agreeing to demolish "all fortifications which English subjects had erected in the Bay of Honduras, and other places of the territory of Spain in that part of the world," nevertheless insisted upon a clause in favor of the cutters of logwood, in the following terms: "And his Catholic majesty shall not permit his Britannic majesty's subjects or their workmen to be disturbed or molested, under any pretext whatever, in their said places of cutting and loading logwood; and for this purpose they may build without hindrance, and occupy without interruption, the houses and magazines necessary for their families and effects; and his Catholic majesty assures to them the full enjoyment of these advantages and powers in the Spanish coasts and territories, as above stipulated, immediately after the ratification of the present treaty." To insure the observance of this treaty, the British government sent out Sir William Burnaby, who not only settled the limits within which the English were to confine their wood-cutting operations, but also drew up for their government a code of regulations or laws, which, under the title of the "Burnaby Code," continued to exist until within a few years. Successful in all their contests with the Spaniards, and now strengthened by the recognition of the crown, the British settlers did not fail to assume a corresponding high tone, and to make fresh encroachments on the Spanish territory. The Spaniards, alarmed and indignant, and alleging that the settlers not only abused the privileges conceded to them by the treaty, but were deeply engaged in smug-

gling and other illicit practices, organized a large force, and on September 15, 1779, suddenly attacked and destroyed the establishment, taking the inhabitants prisoners to Merida, and afterward to Havana, where many of them died. Those who survived in 1782 were liberated, and allowed to go to Jamaica. Strong representations were made to the British government for redress, but the allegations of the Spaniards were found to be so well supported that they were dismissed. For two or three years the establishment seems to have been abandoned; but in 1783 a part of the original settlers, with a considerable body of new adventurers, had revived the place, and were actively occupied in cutting woods. On September 3d of this year a new treaty was signed between Great Britain and Spain, which set forth that, in order "to prevent, as much as possible, all causes of complaint and misunderstanding heretofore occasioned by cutting of wood for dyeing, or logwood, and several English settlements having been formed and extended under this pretense upon the Spanish continent, it is expressly agreed that his Britannic majesty's subjects shall have the right of cutting, loading, and carrying away logwood in the district lying between the River Wallis, or Belize, and Rio Hondo, taking the course of those two rivers for unalterable boundaries, to wit, etc., etc., to the end that a good correspondence may reign between the two nations, and that the English workmen, cutters, and laborers may not trespass from an uncertainty of boundaries."* The article further provided that the conces-

* For exactness of reference, the article of the treaty referred to is here given in full.

"ART. 6. The intention of the two high contracting parties being to prevent as much as possible all causes of complaint and misunderstanding heretofore occasioned by the cutting of wood for dyeing, or logwood, and several English settle-

sions therein contained "should not be considered as derogating from the rights of sovereignty of the King of Spain" over the district in question, and that all the

ments having been formed and extended, under that pretense, upon the Spanish continent, it is expressly agreed that his Britannic majesty's subjects shall have the right of cutting, loading, and carrying away logwood in the district lying between the River Wallis, or Belize, and Rio Hondo, taking the course of the said two rivers for unalterable boundaries, so as that the navigation of them be common to both nations, to wit: by the River Wallis, or Belize, from the sea, ascending as far as opposite to a lake or inlet which runs into the land, and forms an isthmus or neck with another similar inlet which comes from the side of Rio Nuevo, or New River, so that the line of separation shall pass straight across said isthmus, and meet another lake formed by the water of Rio Nuevo, or New River, at its current. The said line shall continue with the course of the Rio Nuevo, descending as far as opposite to a river, the source of which is marked in the map between Rio Nuevo and Rio Hondo, and which empties itself into Rio Hondo, which river shall also serve as a common boundary as far as its junction with Rio Hondo; and from thence descending by Rio Hondo to the sea, as the whole is marked on the map which the plenipotentiaries of the two crowns have thought proper to make use of for ascertaining the points agreed upon, to the end that a good correspondence may reign between the two nations, and that the English workmen, cutters, and laborers may not trespass from an uncertainty of the boundaries.

"The respective commissioners shall fix upon convenient places in the territory above marked out, in order that his Britannic majesty's subjects employed in the felling of logwood may, without interruption, build therein houses and magazines necessary for themselves, their families, and their effects; and his Catholic majesty assures to them the enjoyment of all that is expressed in the present articles, provided that these stipulations shall not be considered as derogating in anywise from his rights of sovereignty. Therefore all the English who may be dispersed in any other parts, whether on the Spanish continent, or in any of the islands whatsoever dependent on the aforesaid Spanish continent, and for whatever reason it might be, without exception, shall retire within the district which has been above described, in the space of eighteen months, to be computed from the exchange of the ratifications; and for this purpose orders shall be issued on the part of his Britannic majesty, and on that of his Catholic majesty his governors shall be ordered to grant to the English dispersed every convenience possible for their removing to the settlements agreed upon by the present article, or for their retiring wherever they shall think proper. It is likewise stipulated that if any fortifications should actually have been heretofore erected within the limits marked out, his Britannic majesty shall cause them all to be demolished, and he will order his subjects not to build any new ones.

"The English inhabitants who shall settle there for the cutting of logwood shall be permitted to enjoy a free fishery for their subsistence on the coasts of the district above agreed upon, or of the island situated opposite thereto, without being in anywise disturbed on that account, provided they do not establish themselves in any manner on the said island."

English, wherever dispersed on the Spanish territories, should concentrate themselves in the district thus defined within eighteen months. Affairs, notwithstanding the explicit stipulations of this treaty, do not appear to have proceeded favorably, for, three years after, in 1786, a new treaty was made between Great Britain and Spain, in which the King of Spain, "from sentiments of friendship toward his Britannic majesty and the British nation," grants an extent of territory additional to that conceded in the treaty of 1783, embracing the territory between the River Sibun, or Jabon, and the River Belize, so that, collectively, the grants embraced the entire coast between the River Sibun, in lat. $17^{\circ} 20'$ on the south, and the Rio Hondo, in lat. $18^{\circ} 30'$ on the north, a coast-line of about ninety miles, with the adjacent islands and bays. But these extended limits were coupled with still more rigid restrictions. The English might cut and export wood, or any "other fruits of the earth purely natural and uncultivated," but they were expressly prohibited from ever using this permission "for establishing any plantation of sugar, coffee, etc.," or manufactures of any kind; and "the lands in question being indisputably acknowledged to belong of right to the King of Spain, no settlements of that kind, or the population which would follow, could be allowed." The erection of all fortifications was expressly forbidden, as was also "the formation of any system of government, either civil or military." And finally, to see that the precise and stringent provisions of the treaty were carried out, a Spanish officer or commissioner was to visit the establishments twice a year, "to examine into the real situation of things." Language is incapable of expressing more precisely the intention of Spain to retain her rights of sovereignty

over the district, the use of which was conceded to the English settlers for the sole purpose of cutting logwood and mahogany, and exporting the fruits of the earth purely natural.* It is not to be supposed that a population composed of so wayward and lawless a set of men, at a distance from England, was remarkably exact in its observance of either the letter or spirit of the treaty of 1786. They seem to have given great annoyance to their Spanish neighbors, who eagerly availed themselves of the breaking out of war between the two countries in 1796, and the consequent suspension of treaty obligations, to concert a formidable attack on Belize, with a view to a complete annihilation of the establishment. They concentrated a force of two thousand men at Campeachy, which, under the command of General O'Neill, set sail in thirteen vessels for Belize, and arrived off the place July 10th, 1798. The settlers, in anticipation of their approach, and effectively aided by the English sloop of war *Merlin*, had strongly fortified a small island off the harbor, called St. George's Cay. From this position they maintained a determined and successful resistance against the Spanish force, which, after a contest of two days' duration, was obliged to abandon its object and retire to Campeachy. This was the last attempt to dislodge the English, who took new courage from their success, and, it may be presumed, did not thereafter pay much regard to the stipulations of previous treaties. It is proper to remark that the defeat of the Spanish attack of 1798 has been adduced as an act of conquest, thereby permanently establishing British sovereignty over the terri-

* "Nothing can more clearly establish the sole right of Spain to these territories than the treaty and convention above mentioned [of 1783-86]. We never had any business there."—*British Quarterly Review*, vol. xxviii., p. 159.

tory. But the partisan writers who take this view entirely forget, or willfully overlook the important fact, that in 1814, Great Britain, by a new treaty with Spain, revived and re-enacted all the provisions of the treaty of 1786. They forget, also, that the British government, until possibly within a few years, never pretended to any rights acquired in virtue of this successful defense; for, as late as 1817–19, the acts of Parliament relating to Belize always refer to it as “a settlement for certain purposes, in the possession and under the protection of his majesty, etc.”* The “certain purposes” here referred to are clearly those set forth in the treaty of 1786, and revived in 1814. But this is not all; after the independence of the Spanish American provinces, Great Britain, not knowing within which new republic the territory of Belize might fall, sought to secure her rights there by incorporating the provisions of the treaty of 1786 in all of her treaties with the new states. It was, in fact, incorporated in her treaty of 1826 with Mexico; was included in the project of a treaty which she submitted to Señor Zebadua, the representative of the Republic of Central America in London, in 1831,† but which failed from the want of ade-

* June 27, 1817, the Parliament of Great Britain passed an act, which received the royal sanction and became a law, entitled,

“An Act for the more effectual punishment of murders and manslaughters committed in places *not within* his majesty’s dominions.”

Its enacting clause is as follows:

“Whereas grievous murders and manslaughters have been committed at the settlement in the Bay of Honduras, *the same being a settlement for certain purposes, and under the protection of his majesty, but not within the territory and dominions of his majesty,*” etc., etc.

This act was amended in 1819, and is still in force. (See 57 *George III.*, p. 183.)

† “En el tratado que yo tenia sobre la carpeta del ministro Ingles, esperando los poderes de mi gobierno, cuando se me obligó á venirme trayendome el archivo de la legacion, se habia introducido un articulo por el qual se deberian conservar á los subditos Ingleses las concesiones que estaban hechos por el tratado

quate powers to negotiate on the part of that representative; and was incorporated also in the project of a treaty submitted to New Granada in 1825, from which it was omitted by New Granada, as relating to territory beyond and never within her jurisdiction. Great Britain, therefore, is without any legitimate rights in Belize beyond those conveyed by the treaties already quoted, which define with the greatest precision the area within which these qualified rights may be exercised. But it appears from a dispatch of Sir George Gray, Colonial Secretary, dated in 1836, that pretensions had been then set up to an additional wide extent of territory, including the entire coast as far south as the River Sarstoon, and inland to the meridian of Garbutt's Falls, on the River Belize.* No pretext has yet been put forward to justify this new assumption, whereby the territory of Belize was more than doubled, and it stands as a simple arbitrary act of power against a weak and unresisting state. Still, the British crown hesitates to constitute Belize as a colony, nor will it guarantee titles to lands within the limits so positively set forth. Politically, Belize is still "a settlement for certain purposes, under the protection, but not within the dominion of the British crown." It is called "an establishment," and is governed by a superintendent and local assembly, dependent on the Governor of Ja-

de 1783 y Convencion de 1786, segun los quales solamente se les permitia el uso del terreno, y se fixaban los limites á que el establecimiento debia circunscribirse. Por este medio, la Inglaterra quedaba sujeta en virtud de un convenio expreso con Centro-America, á guardarle las estipulaciones del tratado y Convencion referida, y se dejaba abierta la puerta para ulteriores negociaciones respecto del mismo establecimiento. El gobierno Ingles estaba conforme en este punto peculiar á sus intereses con este pais, y nada mas se exigia de mi en ningun concepto."—*Manifestacion publica del ciudadano Marcial Zebadua, sobre su Mision Diplomática cerca de su Magestad Británica.* Guatemala, 1832, p. 40.

* This dispatch, addressed to Samuel Coxe, Esq., and dated November 23d, 1836, is given in full in the chapter on "The Bay Islands."

maica. This anomalous state of things has no doubt seriously interfered with the material prosperity of Belize; and while it must be insisted that Great Britain has no technical rights of sovereignty over the territory, yet it can not be denied that the enterprise of her subjects has rescued a desolate coast from the savage dominion of nature, and carried industry, laws, and a qualified civilization where none existed before, and where, if left to the control of the Spanish race, none would have existed to this day. In the interest of civilization and humanity, there can be no doubt that the occupation of Belize by the English is a fact not to be regretted; and the sooner that occupation takes a definite form, the better for the establishment and the world. It was probably these considerations which induced Mr. Clayton, American Secretary of State, to consent to the exclusion of Belize from the operation of the Convention of July 5th, 1850, between the United States and Great Britain, whereby both powers bound themselves "not to occupy, fortify, or colonize any part of Central America."*

Taking the limits of Belize as laid down by Sir George Gray, and as extending from the Rio Hondo on the north to the Rio Sarstoon on the south, and inland to the meridian of Garbutt's Falls on the River Belize, we have a territory about 160 miles long by not far from 60 miles wide at its broadest part, equal to an area of 9600 square miles.

The approach to the coast is through cays and coral reefs, and the channels for ships are intricate and dangerous. For nearly sixty miles vessels wind among

* "The treaty was not understood to include the British settlement commonly called British Honduras, nor the small islands in the neighborhood of that settlement, which may be known as its dependencies."—*J. M. Clayton, Secretary of State, to Sir Henry L. Bulwer, July 4th, 1850.*

innumerable islets, some mere walls of rock, covered with sand, and others loaded with verdure to the water's edge. Between these and the main land is a broad belt of still water, deep, but so clear that the eye can nearly every where penetrate to the bottom, and watch the various forms of marine life which flourish there. The coast itself for some miles inland is low and swampy, thickly covered with forests of mangroves and tropical jungle.* But as we ascend the river the land rises, and assumes an entirely different character, spreading out in what, in the Western States, are called "bottoms," of rich alluvial earth, varying in width from fifty yards to a mile. Beyond these, and parallel to the rivers, are vast tracts of sandy, arid land, covered with forests of red pine, called "pine ridges," the favorite abodes of the cougar, peccary, and other wild animals. Still further inland, ascending the rivers, the pine ridges give place to others of a different character, called "cahoon ridges." These have a deep, rich soil, and are covered with myriads of palm-trees, known as "cahoon palms," of which the arching branches form cool, beautiful vistas, scarcely penetrated by the rays of the sun. Succeeding these are broad savannas, studded with clumps of trees, through which the streams which descend from the mountains wind in every direction. The mountains themselves rise in a succession of ridges, parallel to the coast, the first of which, called the Manati Hills, are from 800

* "The whole coast of British Honduras, for two or three miles inland, is low, flat, and swampy. But in making use of the word swamp I do not mean bog or morass, but simply, in consequence of its being frequently overflowed with water, a soft, moist, and spongy soil. But the soil itself is a rich black loam, admirably adapted to the cultivation of rice, and, by drainage, capable of being made equal to any soil in the world. In ascending the rivers the land gradually rises and assumes a totally different character, becoming a stiff clay."—*Temple*.

to 1000 feet above the level of the sea. Beyond these are the Cockscomb Mountains, estimated to be at least 4000 feet high. From these mountains descend numerous streams, through wild, picturesque valleys, forming many cataracts, and in some places subterranean passages through the rocky barriers which interpose between them and the sea.* Not less than sixteen of these streams, sufficiently large to be called rivers, enter the ocean, between the Hondo and the Sarstoon.†

The climate of Belize is hot and damp, but favorably influenced by the full exposure of the country to the ventilation of the trade winds. The average mean temperature for the year 1848 was 79° Fahr.; the

* "On a branch of the River Sibun, named Indian Creek, are situated the caves; these are subterranean passages, which have been formed at the base of three or four mountains of very considerable height, no doubt by the force of the current of water, which probably for many centuries has forced its way through them. The largest of these passages is somewhat more than a quarter of a mile in length, though in this country it has a greater extent given to it. It would certainly require no common powers of description to delineate with fidelity the exquisite beauties connected with the largest of the caves. The entrance to it from Indian Creek, after many windings, bursts suddenly on the sight, and resembles very closely the aperture of an oven, and is thickly overhung with rocks and trees of the grandest but wildest workmanship. When this is passed a wide and spacious lake immediately commences, the water of which is silent and deep, being scarcely heard to murmur but during the most tempestuous floods. The lofty roof is arched with the most exact proportion, and is profusely studded with glittering crystallizations. Torch-light affords the visitor the only means of advantageously viewing this sublime piece of scenery; for if, in one or two places, an occasional beam of the sun, bursting with inconceivable lustre through the clefts of the mountain, be withdrawn, entire darkness pervades the whole, and the smallest sound made in passing being quickly loudly reverberated, is forcibly calculated to strike the ear with a feeling of solemn grandeur."—*Henderson's Honduras*, p. 44.

† "They are the Hondo, the New River, Northern River, the Belize River, the Sibun, the Manati, Mullins River, Sittie River, Monkey River, Deep River, Middle River, Rio Grande, Golden Stream, Moho River, the River Termash, and the River Sarstoon. Many of these rivers run a great distance before they fall into the sea. The Sibun, without taking into consideration its numerous windings, runs in a direct line about sixty miles; the Belize River about ninety, and the River Hondo about one hundred and thirty. Of the Belize River there are not less than five great branches."—*Temple*.

amount of rain which fell during the same period, 46½ inches.* (See *ante*, p. 41.) Belize is not troubled by hurricanes, nor has it been seriously affected by the earthquakes which have at different times caused so much alarm in the neighboring Central American states. It has never been afflicted by epidemics, except the cholera. Yellow fever frequently occurs, but sporadically, and never in an endemic form. Although a number of Europeans reside in Belize without apparent serious inconvenience, yet the climate is not regarded as favorable to the white race. Negroes and their descendants, however, find here a most congenial climate, and numbers of them reach an age of more than 100 years. There seem to be no aboriginal tribes within the limits of Belize, except some Caribs, who have fled into it as a place of refuge. The present population consists principally of negroes, originally brought into the country as slaves, and a hybrid race sprung from the intercourse of Europeans with Africans and Indians. They are engaged in cutting mahogany and dye-woods, and in fishing; a few of them cultivate small patches of ground. The scanty white

* "The temperature ranges from 68° to 86°, although it is sometimes as high as 90°, and sometimes as low as 56°. The seasons, as in most tropical countries, are divided into wet and dry; the former commences in the month of June, and continues until the end of February. The latter begins in the month of March, and ends in the first week in June. During the dry season there is scarcely ever a drop of rain, the ground becomes parched and hard, and vegetation ceases, except where streams and creeks irrigate the land. The wet season is ushered in with violent winds from the east, torrents of rain, and the most terrific thunder and lightning, which sometimes continue night and day for three or four days together. It must not be supposed, however, that, because nine months in the year are denominated the wet season, it is always raining during that period. After the first three weeks of that season there is much fine weather, it being sometimes perfectly dry for a month together, and there is very little thunder and lightning after the first appalling fit. The heaviest and most continued rain, but unaccompanied by thunder, falls in November, December, and January, when cold north winds prevail."—*Temple*.

population is occupied in commerce. The number of inhabitants in 1823 was as follows:

Whites . . .	156	males . . .	60	females . . .	216	in all.
Slaves . . .	1654	" . . .	814	" . . .	2468	"
Negroes . .	310	" . . .	303	" . . .	613	"
Mixed . . .	1299	" . . .	582	" . . .	1881	"
Total . .	3419	" . . .	1759	" . . .	5178	"

In 1845, according to the Superintendent's returns, the population was,

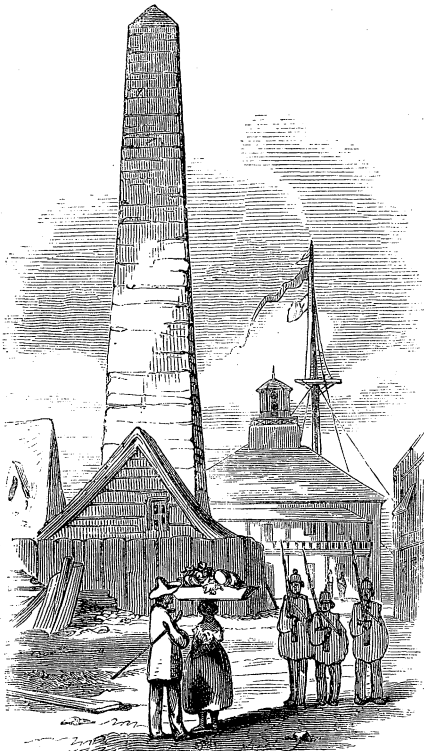
Whites . . .	240	males . .	159	females . . .	399	in all.
Colored . . .	6755	" . . .	2655	" . . .	9410	"
Total . .	6995	" . . .	2814	" . . .	9809	"

The Carib and other Indians falling within the district are probably included in this enumeration under the head of "colored." Slavery was abolished in 1834; the number of slaves liberated was 1901, and the compensation paid their owners was £101,398.

Since 1845 the population of Belize has largely increased. It was estimated in 1848 at 14,000, and is now supposed to be not far from 25,000. This large increase has mainly resulted from the civil troubles of the neighboring states, but particularly Yucatan, which have driven the distracted inhabitants to seek refuge here.

The town of Belize is situated at the mouth of the River Belize, and occupies both banks of the stream, which is spanned by a bridge. Its site is low and swampy, and there is little dry ground, except what is formed artificially by filling in sand taken from the bottom of the harbor. It contains ordinarily about 5000 inhabitants, but during the Christmas festivities, when the mahogany-cutters come into it, this number is fully doubled.* Previous to a destructive fire,

* "At Christmas the town is always very full, for at that time the laborers

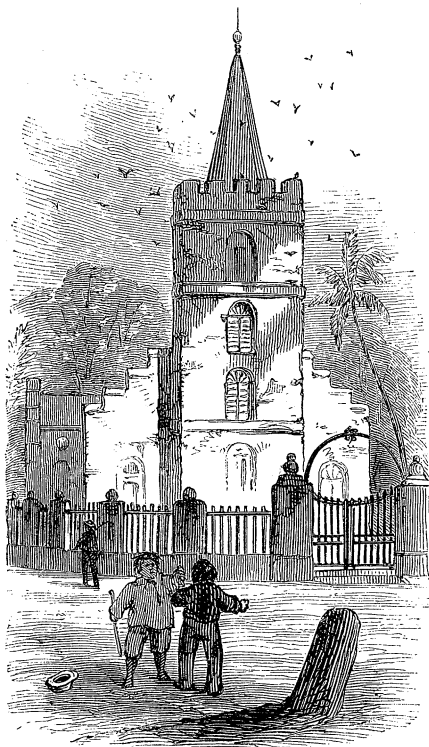


CUSTOM-HOUSE AND ARTESIAN WELL.

which took place in 1856, the town had not far short of 1500 houses, stretching for a mile and a half along the shore. The dwellings of the more wealthy inhabitants are large and commodious, and have a respectable and thrifty appearance. Besides the government houses, court-house, jail, barracks, a very neat iron market, and other public buildings, there are several places of worship, including the brick church of the establishment, and the

come from the various mahogany works to receive their wages, if any be due to them, and to enter into contracts for the ensuing year. It is then that you see a class of men who, from their height, symmetry, and muscular development, would form splendid models for a Hercules or an Antæus. At this time there are pitpan races between the negroes and the Caribs. A pitpan is a long, flat-bottomed boat, deep and wide in the middle, but shallow at the ends, which are square. Some of them are fitted with a wooden awning, which can be removed at pleasure. It is made of one log of wood, which is sometimes mahogany and sometimes cedar. The race is a curious spectacle. The enormous length of the boat, sometimes sixty feet; the great number of paddlers, with their bodies naked to the waist, and black and shining as polished ebony; their broad, brawny chests, and muscular backs and arms; their shrill, dissonant, ferocious cries; their wild gestures, sometimes plying the paddle with inconceivable vigor, which sends the canoe with the swiftness of an arrow through the water, sometimes hurling it into the air, and dexterously catching it as it falls, and sometimes dashing up the spray, which for a moment makes them invisible, present altogether such an exhibition of savage nature as to cause the beholder for an instant to doubt whether the wild creatures he sees belong to the same species as himself."—*Temple*.

Methodist, Baptist, and Presbyterian chapels. Lately



CHURCH OF ST. JOHN, BELIZE.

some large and costly fire-proof warehouses have been built, which add much to the beauty of the place. Belize derives little support from agriculture, its supplies of cattle, fruit, etc., being chiefly obtained from Bacalar in Yucatan, and Omoa and Truxillo in Honduras. It obtains its principal importance from being the commercial entrepôt and dépôt for the neighboring Spanish states of Yucatan, Guatemala, and Honduras. This source of prosperity, howev-

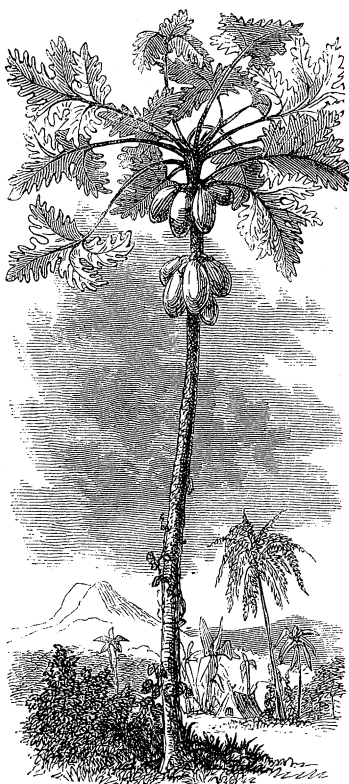
er, is fast drying up, from the diversion of trade on the Pacific to Panama, and from the opening of direct commerce between several of the states and the United States and England. In 1848 the total value of its imports was \$830,000, of which \$260,000 came from the United States. Its exports for the same year were \$1,765,000. The inward tonnage was 18,521 tons; the outward, 18,626 tons. In 1855 the imports had considerably fallen off, from the causes already mentioned, but the exports had increased to \$2,260,000. The inward tonnage for that year was 31,124 tons;

the outward, 27,803 tons. The principal product of Belize is mahogany, of which the average yearly amount exported for the past ten years has been 8,000,000 feet, or 20,000 tons, equal for the whole period to 200,000 tons, requiring 160,000 trees.

The natural, and particularly the vegetable resources of Belize are very great, and have been fully and ably set forth by Chief-justice Temple. As we have seen, the establishment was first made for the purpose of cutting logwood, which for a long time was the chief source of wealth of the settlers, and which to this day is a considerable article of export. Not less than 4332 tons were exported in 1848. As in Dampier's day, it still retains a superiority in the market over that of St. Domingo and Jamaica. At the present day, however, mahogany has become the great staple of the country. The impression that most of the mahogany has been cut is contradicted by Judge Temple, who affirms that there is sufficient wood, both on granted and ungranted lands, to supply the European and American markets for many years to come. The Belize mahogany is extensively used for ship-building, not less than 12,000 tons having been purchased by the British government and 3000 by the French government during the year 1856 for this purpose, at an average price of \$55 per ton. The mahogany-tree requires a rich, dry soil, and the best is produced to the north of the River Belize, where the natural conditions are most favorable for its growth.* Besides the mahogany, there are also several other woods of great

* "The qualities of mahogany which render it peculiarly fitted for ship-building are its lightness and buoyancy, its freedom from dry rot, and its non-liability to shrink or warp. The price of mahogany varies according to the size, figure, and quality of the wood. One tree from the northern district, which was cut into three logs, sold for £1800, or 10s. per superficial foot of one inch."—*Temple*.

value, as rosewood, palmetto, dark and beautifully figured, Santa Maria, which possesses the properties of the Indian teak, caoutchouc or India-rubber, sapodilla, and innumerable others.



THE PAPAYA.

There is another tree, less known than any of those just mentioned, but perhaps having elements of value equally great with the best, namely, the *cahoun* (Spanish *coyol*) palm. It abounds in all the river valleys, not only throughout the district of Belize, but along the entire northern coast of the Republic of Honduras. It is thus described by Judge Temple:

“The branches of this tree resemble those of the cocoanut, but instead of growing from the top they shoot up and radiate from the bottom. It does not grow so high as the cocoanut-tree, and the stem is

considerably thicker. It bears a nut about the size of an egg, which grows in large bunches, resembling ponderous clusters of grapes. The oil made from this nut is very much superior to that of the cocoanut. A pint of the former will burn as long as a quart of the latter. The first congeals at a temperature of 72°, the second at a temperature of 68°. The cahoun-tree,

which will only grow in the richest soil, abounds in British Honduras, though it is not found in any of the West India islands; and Sir William Hooker informed me that it was not known in Europe until I sent it to this country.

“The order and regularity with which it grows is surprising. I have seen rows of it presenting the appearance of having been planted with the greatest care—long avenues, which closely resembled the nave and aisles of a cathedral, the arched leaves meeting overhead, and producing an exact imitation of the vaulted roofs; and, if the sun were declining, the horizontal rays, shining at intervals through one side of the avenue, created the splendid effulgence of the most richly-painted window. The kernel tastes somewhat like that of the cocoanut, but it is far more oleaginous, and the oil extracted from it is infinitely superior. No other oil except that of the cahoun and the cocoanut is burnt in this country. There is no question whatever that, if it were known to the public in general, it would completely supersede the use of the cocoanut oil. Belize consists principally of two kinds of land; the one is called a pine ridge, and the other a cahoun ridge. The former is, generally speaking, sterile and sandy, and but here and there interspersed with patches of greater fertility, green spots in the midst of the sandy wilderness, the resort of immense herds of deer and antelopes. This ridge, densely covered with pines, which are very much more resinous than the red pines of North America, might yield any quantity of pitch, of an excellent quality for commercial purposes.

“The *cahoun ridge* differs materially from the pine ridge. The soil of the latter, as I have said, is sandy and unproductive, whereas that of the former is *rich*

and *loamy*, and possesses every agricultural capability. There is no tropical plant which can not be grown upon these ridges in great abundance.

“The *cahoun* there abounds. For miles and miles you have nothing but forests of it; and yet, with all these trees bearing nuts from which a most valuable oil can be extracted—an oil for which there would be a ready market in every town of Europe and America—no one has yet been found to turn them to a profitable account. Not one single bottle of oil has ever been exported to Europe or elsewhere as an article of commerce. Over these vast fields of wealth a few old negro women occasionally wander, picking up the nuts which have accidentally fallen to the ground, from which, in their rude and clumsy way, they manufacture as much oil, and no more, as will serve to satisfy their personal wants, and purchase for them a few luxuries, such as pickled pork, gin, and pipes and tobacco!”

Mr. Faber, crown surveyor of Belize, estimates that two fifths of the entire territory are covered with these palms. He adds: “The *cahoun* ridges are mostly along the tracks of the rivers, and possess the richest virgin soil; some of them are only a quarter of a mile deep, while others extend to from twelve to twenty miles in depth. The trees grow at an average distance of five yards from one another, thereby forming arches of evergreens, which soften the rays of the tropical sun, and give a majestic air to those forests whose silence is only broken by the songs of bright-plumaged birds, or the solitary cries of some wild animal roaming in these wildernesses. These *cahoun*-trees yield one crop every year, consisting of generally three, and sometimes four bunches of nuts, as close together as grapes. The nuts are of the size of a small turkey’s egg, and, on an aver-

age, there are eight hundred of them in one bunch. The people here extract the oil in the following manner. When the nuts are what they term full, they break the shell, which is very hard, between two stones, then pound the kernel in a wooden mortar; the sediment is then put into a boiler with water, and boiled down until all the oil, or fat, floats; they skim the oil off, fry it in an iron pot, so as to disengage all the aqueous particles, and then bottle it. By this simple process the average yield is one quart bottle of oil from one hundred nuts.”*

Several varieties of cotton are indigenous in the district of Belize, some of which have been found to be of superior quality; but up to this time no attempt has been made to produce it for exportation. Ultimately, however, when the resources of the country shall be further developed, it can scarcely fail to become a product of importance. The same may be said of tobacco, sugar, rice, cacao, and other great tropical staples now utterly neglected, and likely to remain so until the failure of the supply of mahogany and logwood, and the transfer of Central American commerce to some place more favorable to trade, shall compel the people to turn their attention to other pursuits, and to the development of the various natural resources of the country itself.

The indigenous animal kingdom comprises many valuable fur-bearing species, as ounces, panthers, tapirs,

* Specimens of this oil, sent to England for experiment, have obtained a high reputation for all the purposes to which cocoanut oil is applied. The Director of the British Sperm Candle-works considers it superior to the latter for making composition candles; and the result of the experiments of Mr. G. F. Wilson, published in the *Journal of the Society of Arts*, is, “that the commercial value of the cahoun oil equals that of the highest quality of cocoanut oil which comes from the Malabar coast, and sells at \$150 per tun.”

deer, antelopes, peccaries, and warrees, cavis, agoutis, armadillos, opossums, and raccoons. Monkeys are numerous, and some of them are eaten. Manatis and alligators are met with in the lagoons along the coast. Among the numerous birds are turkeys, spoonbills, toucans, Muscovy ducks, macaws, and many kinds of parrots, pelicans, and humming-birds. Fishes are plentiful, and of many varieties, some of which are very large, and turtles furnish a very common and nutritious edible to all classes. Lobsters and shellfish are abundant and excellent. Domestic animals, as cattle, sheep, and goats, are not kept in sufficient numbers for consumption. The cattle are principally used in drawing timber and logwood from the forests. But few horses are bred in the settlement.*

As already observed, there are no aboriginal tribes within the limits of Belize. The coast had a considerable population when first discovered, but the frequent forays made immediately thereafter by the Spaniards from Cuba, for the purpose of taking prisoners for slaves, drove the Indians inland, beyond the mountains of Chama. The evidences of their occupation still remain in the form of tumuli, called by the mahogany-cutters "Indian hills." Henderson describes them as follows:

"About thirty miles up the Belize River, contiguous to its banks, are found what in this country are called 'Indian hills.' These are small eminences,

* "There are many animal products to be ranked among the commercial commodities of this country—turtle, tortoise-shell (which is the shell of the hawkbill), the roe of the calipever, equal in all respects to the roe of the sturgeon and the sterlet which comes from Russia, the liver of the hiccatee, the oil from the tail of the manatus, the eggs of the iguana, the scales of the tarpaum and the calipever, the jew-fish, from the thick gelatinous skin, bones, and fins of which isinglass might be made, and many others, which I have not time to notice."—*Temple*.

which are supposed to have been raised by the aborigines over their dead, human bones and fragments of a coarse kind of earthenware being frequently dug from them. These hills are seldom discovered except in the immediate vicinity of rivers or creeks, a circumstance which has afforded another supposition, that they were formed by the natives as places of refuge during the prevalence of floods, an inconvenience to which, in such situations, and before the country was in any degree cleared of wood, they must frequently have been exposed. The foot of these hills is regularly planted round with large stones, and the whole may be thought to bear a very strong resemblance to the ancient barrows or tumuli so commonly found in various parts of England."

The Caribs established at "Standing Creek," and one or two other points on the coast of Belize, are the descendants of the natives of San Vincent, carried by the British government to Roatan in 1796. As elsewhere explained, they were subsequently invited to the main land by the government of Honduras, and established in the neighborhood of Truxillo. After the independence of that state, some further attempts were made by Spain to recover her authority, in which a portion of the Caribs became implicated, and were obliged to escape to Belize, where many of them still remain. A body of refugee Indians from Yucatan have also established themselves on the banks of New River, within the limits of Belize as asserted by Great Britain. Their numbers are rapidly augmenting, and the settlement promises to become one of importance. Of these Indians Judge Temple draws the following portrait:

"The Yucateco Indian is diminutive in size, possess-

ing small feet and hands, and delicate limbs; but the shape of his face is very singular. His portrait may be seen any day in the Egyptian department of the British Museum. His hair is long, straight, and of a raven black. His face is roundish, and his cheek-bones are very high. His lips are thick and projecting, his chin round and retreating, his nose slightly aquiline, and broad at the nostrils, and his eyes black, large, full, starting, almond-shaped, and almost hidden within the folds of a thick, heavy, sleepy lid. He always walks with his toes turned inward, and his feet are clothed with sandals, the antiquity of which is indisputable. The sole of this sandal is generally of wood, but sometimes it is made of thick bull's hide. It is fastened to the foot somewhat in the same manner as skates are, but the foot is naked, and a cord which passes through a hole at the end of the sole goes between the great toe and the one next to it."

The succeeding sketch of the habits of the Belize mahogany-cutter is not less exact:

"The mahogany laborers commence their operations about six o'clock in the morning. They have a task set them, which they generally accomplish before noon; the rest of the day is their own, which they spend according to their several tastes. One man throws himself into his hammock and falls asleep, 'the world forgetting, by the world forgot.' This is a favorite pastime. Another man smokes his pipe, looks very meditative, and reflects upon nothing. Another takes his gun, a very fine, single-barreled fowling-piece, which cost three dollars. This he loads, first with a double charge of powder, then with an inch of oakum, then with as much shot as will lie in the palm of his hand, and, lastly, with another inch of oakum, all of which is

rammed down with no child's arm. Verily miracles have not ceased. These guns never burst. I suppose they are warranted not to burst, and therefore don't. Having performed the operations above described, he next throws over his left shoulder a large canvas bag, the contents of which are various and somewhat curious. First there is a large bull's horn, with a cork at the small end, and a plug made of wood at the other. This contains his powder. Then the shell of a cahoun nut, neatly cut in two, curiously carved, and made to open and shut like a box. This is a snug receptacle for percussion caps. Then a canvas bag, drawing at the mouth with strings, and having printed upon it, in large capital letters, the word NAILS, and filled with shot. Then a deerskin case, which rolls up, and is tied round with a thong, also of deerskin. In this is deposited a considerable quantity of unmistakable returns, or negro-head, with a flint and steel. Then a short, black, venerable-looking pipe, the fragrance of which would have driven good King James out of his senses. Then the shell of a young cocoanut, with a hole at one end. This contains tinder, which is used for the purpose of lighting the pipe. The rest of the articles are a gin-flask, a calabash of the shape and size of a breakfast basin, a roasted plantain, a piece of dried fish, and a case-knife. The bag containing this assortment, as I said before, he slings across his left shoulder, girds his waist with a leather strap, from which hangs a machete, holds his Manton with both hands behind his neck, so that he presents the appearance of a cross, and sallies out in quest of deer, peccary, gibbonet, curasow, qualm, armadillo, iguana, squirrel, monkey, or any other edible animal which fortune may throw in his way. Another man, more industriously

disposed, shoulders his huge axe, fit to cleave the skull of a Titan, and proceeds into the bush in search of a mahogany or cedar tree. Having found one suitable for his purpose, he will fell it; then he will square it; then he will shape it in the form of a pitpan, and then dub out the inside with an adze. Being finished, he will bring it down to Belize at Christmas, and sell it for fifteen or twenty dollars."

Belize is governed by a Superintendent, nominated by the sovereign, "to watch over the interests of the settlers, to secure them from any improper intrusion of foreigners, and to regulate all affairs which more particularly affect the dignity of the crown." There is also a mixed legislative and executive power, termed "the magistrates of Honduras," consisting of seven members, elected annually. All their enactments, to become law, must first receive the assent of the chief executive. They are the councilors of her majesty's superintendent, the guardians of the public peace, judges of all the lower courts; they form the court of ordinary; they are the guardians of orphans, and can delegate their power in the management of the property of such persons to another, etc. They settle all salvage causes, manage the finances, and control the treasurer. No money can be paid without the sanction of four of them, who sign all orders for issue. Their services are gratuitous. Trial by jury is established, and from the decisions of the court appeal lies directly to the sovereign in council. The military protection of the establishment consists of one company of artillery and a regiment of the line. There is also a local maritime force. The superintendent is commander-in-chief of this militia. All duties and taxes are levied under the authority of acts passed by the magistrates and sanc-

tioned by the Superintendent. The ordinary expenses of the government amount to about £20,000 per annum. In church affairs, Belize is an appendage to the diocese of Jamaica, and the public religion is that of the Church of England. The public support a common school at Belize, and there are several good private schools, besides a number of Sunday-schools, the latter of which are conducted chiefly by Dissenters.

B A Y I S L A N D S.

CHAPTER XXVII.

DISCOVERY—SPANISH FORAYS—DESCENTS OF THE PIRATES
—REPORT OF DON FRANCISCO DE AVILA—DEPOPULATION
—SEIZURE BY THE ENGLISH—RECAPTURE—TREATIES OF
1783-86—SUBSEQUENT AGGRESSIONS—FINAL SEIZURE
AND ORGANIZATION AS A COLONY—PRESENT CONDITION.*

IN the Bay of Honduras, within sight of the northern coast of the republic of the same name, is a group of islands, which were called by the Spaniards "Las Guanaxas." Their names are Guanaja (sometimes called Bonacca), Roatan (anciently Guayama), Utila, and a number of small dependent islands and coral cays. Guanaja, the easternmost of the group, was discovered by Columbus in his fourth and last voyage, and from its shores he for the first time descried the American continent. From the number of pine-trees upon it, he named it the Isle of Pines. He reached the island July 30th, 1505, and sent ashore his brother, Don Bartolome, who there found a large canoe, "as long as a galleon," covered with an awning, and laden with commodities, such as cloths of cotton of various colors, a kind of jacket without sleeves, swords made by inserting flints in the edges of flat pieces of wood (forming the weapon called by the an-

* For a general account of the physical character and the productions of these islands, see Chapter vii.

cient Mexicans *mahquahuitl*), copper axes, crucibles for melting copper, and beans of cacao, "which were used as money." Diego de Porras, who accompanied Columbus, describes the island as well peopled, and the inhabitants of "good stature, and warlike." They were shown gold, and pointed out the main land, the mountains of which were within sight, as the place where it could be found. Columbus took one of them, "an old man named *Jumbe*, who seemed to be most discreet," and set sail for the continent, landing for the first time on its shores at a point which he called Punta de Caxinas, now Punta Castilla, on the 14th of August of the same year. The Indian *Jumbe*, it may be observed, is called "a merchant" in the chronicles, and Herrera ventures the remark that he was returning from Yucatan when discovered by Columbus. That communication was kept up between these islands and the main land of Honduras is certain; and there are good reasons for believing that the natives of the islands, and those of the country around the port of Truxillo, pertained to the same stock, and spoke a common language.

For thirteen years after their discovery we hear no more of these islands. But with the settlement of Cuba there was created a demand for slaves greater than could be supplied by the reduction of the natives, and the Spaniards began to make descents on the adjacent islands, and on the main land, for the capture of prisoners, who were sold as slaves. Expeditions were regularly fitted out for this purpose, which literally depopulated the entire coast of Yucatan, by driving the terrified Indians into the interior, whence they never returned. Hence the desolation and solitude which reigned on that coast during the succeeding century, and which so astonished the explorers of that era.

In 1516, according to Herrera, a ship and tender were fitted out from Santiago de Cuba for the island of Guanaja, where the expedition landed successfully, and captured a considerable number of Indians. The vessels were filled up with provisions from Guayama (Roatan), and returned to Cuba. On reaching port, the Spaniards, leaving nine of their number on guard, went on shore to celebrate their success. They had hardly landed when the Indians forced open the hatches, overpowered the guard, and, without chart or compass, set sail and returned to their homes. "When the Spaniards on shore saw them sailing away," the chronicler quaintly observes, "they shouted and gesticulated as if they had lost their senses, but in vain." The Indians found a bergantine at the islands, with a force of twenty-five Spaniards, lying in wait for prisoners. These the Indians at once attacked with so much vigor that the bergantine made a precipitate retreat to Darien.

These events created a great excitement in Cuba, and the survivors of the expedition, with the aid of the governor of the island, resolved on revenge, fitted out two larger vessels, well manned and equipped, for a descent on Guanaja. When they reached the island, they found that the vessel which the Indians had captured had been burned. They nevertheless landed, and had several severe encounters with the natives, capturing a large number. They next sailed to Utila, where they were more successful, taking altogether more than five hundred prisoners, whom they put below deck, fastening the hatches above them. Forgetful of their former misfortunes, or over-confident of their present strength, most of them again went on shore for a carouse. The Indians of one of the vessels took this opportunity to

rise, and, breaking open the hatches, soon cleared the ship, killing or drowning the guard and entire crew. In attempting to land, however, the Spaniards, hurrying on board the other vessel, bore down on them, and a bloody battle ensued, which lasted for upward of two hours. Some of the Indians escaped, but most were recaptured, and the Spaniards sailed for Cuba with 400 slaves and 20,000 dollars in gold, which they had found on the islands.

Subsequently, under license from the governors of Cuba, these forays were resumed, and old Bernal Diaz tells us that he was concerned in one of the expeditions before joining Cortez. He says:

“We purchased two vessels of considerable burden; the third was given to us by Diego Velasquez on condition that we should first invade the Guanaja Islands, and bring him thence three cargoes of Indians for slaves, which he would consider as an equivalent for the vessel.”

When Cortez reached Truxillo, in Honduras, in 1526, he found that some of the islands had become entirely deserted in consequence of these incursions. The natives who remained sent messengers to ask his protection; and hearing that new expeditions were fitting out in Cuba and Jamaica, he at once dispatched a vessel to order them away, notwithstanding they had a license from the Governor of Cuba.

From this period forward, for nearly a century, we hear little of these islands. The attention of Spain was absorbed in broader and grander fields of enterprise and glory in Mexico, Guatemala, and Peru. The islands appear to have been quietly occupied by their inhabitants, and governed by the authorities of Honduras as dependencies of the port of Truxillo. In the

beginning of the seventeenth century, however, in common with all the coasts and islands of the Spanish Main, they were exposed to the incursions of the freebooters, who had begun to swarm in the sea of the Antilles. They suffered so much from this cause that it was finally proposed, in order to save the inhabitants from extermination, to withdraw them to the main land, and, by destroying the towns and plantations, deprive the corsairs of an asylum, and of the means of prosecuting their lawless enterprises on the adjacent coasts. Many reasons were assigned for and against this measure, and much time lost in the discussion; but, finally, a formidable demonstration of the pirates in 1639 hastened matters to a conclusion. In that year the President of the Audiencia of Guatemala ordered Don Francisco de Avila y Lugo, governor and captain general of Honduras, to report to him on the islands and their condition, and also on the policy which should be pursued in respect to them. The report of this officer has never been published, but the MS. is preserved at Simancas, whence a copy, now in my possession, was obtained by the historian Muñoz. As it contains a full and accurate account of the islands and their inhabitants at that period, I subjoin a translation *in extenso*. It will be observed that the natives, greatly reduced in numbers, were wholly subject to the Spanish rule, owing service to the port of Truxillo, speaking Spanish, and having churches in their villages.*

* In a work published in Malaga in 1623, entitled "Tratado Verdadero del Viage y Navegacion deste año de 1622, que hizo la Flota de Nueva España y Honduras, etc., etc., por Antonio Vasquez de Espinosa," page 13, occurs the following paragraph relative to these islands: "seguendo nuestra derrota y viage en demanda de la Havana, *passando por entre las islas Guanaja y Roatan de Indios isleños, sujetos a la ciudad de Truxillo, etc.*," i. e. "passing between the islands Guanaja and Roatan, inhabited by island Indians, subject to the city of Truxillo,

DESCRIPTION OF THE GUANAJA ISLANDS; *being part of a Report drawn up under the orders of the President of Guatemala, by DON FRANCISCO DE AVILA Y LUGO, Governor and Captain General of Honduras. Dated COMAYAGUA, November 1st, 1639.*

The Gulf of Honduras, or Guanaja, considered as included between the coasts of Honduras and Yucatan, penetrates deeply into the province of Vera Paz, where it forms an angular bay, commonly called the Gulf of Guanaja. The coast of Yucatan, with its adjacent islands, Cozumel, Quita Sueño, Pantoja, Caratan, La Mani, Olbob, and their intermediate cays, have a direction northeast and southwest; and the coast of Honduras may be said to run due east and west, forming, with that of Yucatan, a triangle, of which the meridian of Punta Castilla de Truxillo, cutting Cape Honduras, touching the eastern part of the island Guanaja, and striking the island of Cozumel, would form the third side. This meridian is about 61° W. of the Azores, and $79^{\circ} 30'$ W. of Lisbon; and from the point of Cape Honduras, which is in lat. $15^{\circ} 57'$ N., to the island of Cozumel, where the said meridian strikes it, in lat. $18^{\circ} 55'$ N., the distance is about 51 Spanish leagues, to which we must add 6 leagues if we calculate the distance from Punta Castilla. From these data we may easily determine the lengths of the other sides of the triangle, and the relative positions of the ports, bays, rivers, and other points mentioned in the maps.

The first port, and that most to be considered in connection with the question of withdrawing the population (*despoblacion*) of the Guanaja Islands, is the port of Truxillo, on which they depend; it being the nearest point on the main land occupied by Spaniards, and more to be depended on, in respect of permanence, than the other ports, which are Munguiche, Triunfo de la Cruz, Rio de Sal, Puerto de Cavallos, Sancto Tomas de Castilla, called also Amatique, and Golfo Dulce. It is specially to be noticed that Truxillo alone is peopled by Spaniards, and that it may easily be fortified and rendered almost impregnable." The nature of this dependence is fully explained by the relation of De Avila, printed in the text.

nable; while all the others are without inhabitants, either Spaniards or Indians, and, in respect of being fortified and in other particulars, have no equal advantages.

There are four towns of Indians in the Guanaja Islands, namely, Guanaja, Masa, Roata, and Utila. These islands themselves may be best described in their order from east to west. The first, in lat. $16^{\circ} 30' N.$, and long. $61^{\circ} W.$ from the Azores, is Guanaja, from which the others of the group have received the generic name of Guanajas. The second is Guayama, called by most cosmographers Aguaiciva, and by the Spaniards and Portuguese Masa and Roata, from two towns of Indians, which are separated, as is also the island itself, by a narrow canal not admitting of navigation, even by vessels of the lightest draft, so that the two parts are considered as one island. The third principal island is Utila, which contains the fourth town above-mentioned. Collectively, these islands at present contain about 120 tributaries, more or less, or, including women and children, about 400 souls.

Adjacent to these islands, and in part surrounding them, are many cays (those called Mayaguera are seven in number), besides a number of islets, of which the principal are Guaidica, Elem, and the Francisco Islands, none of which are inhabited.

The above-named island of Guanaja is distant due north from Cape Honduras somewhat less than seven leagues; it is about six leagues long by three wide, is elevated, and may be seen at a great distance at sea, and has a port with two entrances, of which the best is that called the channel of Cayo de Pajaritos. This port is at the western extremity of the island, and through it the town is reached, which now contains 84 tributaries, whose contributions go toward paying for the ordinary look-outs and watch-posts of the port of Truxillo and Punta de Castilla; but neither these contributions, nor the others now collected for the purpose, suffice to defray these expenses, the deficiency being made up by those living in the neighborhood of the posts themselves.

This town, which contained more than 60 (?) houses and a church, was burned by the Dutch (*Olandeses*) in February of this year, 1639. The first house fired was that of the cacique

Q q

Alonzo Gaitan, against whom a process has been issued, which will be followed up to a summary result, on account of the communications which he and other Indians have had, and still have, with our enemies, Dutch, English, and French. It appears that an Indian named Soto went from this island, in the said month, with the Dutch to the Gulf of Dulce, to point out to them the stores of cochineal, of which they robbed upward of 400 boxes, besides wine and other articles, to the value of more than 100,000 ducats! This Indian also assisted in taking away and hiding the indigo and other merchandise which the enemy could not carry away, and which might be discovered had he not been shot by a Spaniard whom he had offended. But this information may yet be obtained from an Indian of Utila, named Alonzo, who, in the beginning of September of this year, went voluntarily with the enemy. He is grandson of the cacique Alonzo Gaitan, of Guanaja, son of his son George; and it is of common report on the coast, and in all the posts, that of all persons he is best able to give information and advice to our enemies. The guilt of this Indian is attested by the declarations of four witnesses.

The fertility of Guanaja and the remaining islands is very great in yucas and esculent roots, and it abounds in palms and other fruit-trees. The Indians who inhabit these islands, for the most part, know Spanish; they are ingenious, and make cordage and cables of *mahagua* (fibres?), which they take from the bark of trees; and they know, also, how to manufacture pitch, tar, and lime. They are great fishers, and good sailors for transporting goods and for carrying passengers, in which business they have been occupied by the inhabitants of Truxillo for many years, recognizing their justice, and being at their orders and commands; for a great part of the supplies of the people of Truxillo, and of the sailors who come to that port, consists of fish, cassava, and maize, collected by these Indians, who render also the ordinary service of *Tequitinos* for the public works of Truxillo.

The island of Guayama, or Guaiciba, which contains the two towns of Masa and Roata, is west-northwest from Cape Honduras, and not northwest, as represented by the Portuguese, and

as laid down in certain maps and charts. It is in lat. $16^{\circ} 20'$ N. In the two towns of Masa and Roata there are barely fourteen tributaries, of whom but four or five pay common tribute with these of Guanaja; the tributes of the remainder being due to Cosmo Gonzalez, to whom they were given in *encomienda*. In length this island is six leagues, in width three leagues. Its eastern part is high and level, but its northern shore is low, or elevated only in the centre; and here the coast is wide and without ports. On the south coast are two ports, beyond which are seen the cays extending almost east and west, on all of which the sea breaks, except the two most to the northeast, inside of which there is anchorage in six and seven fathoms. To enter the first port the cays are left to the west, and although the entrance to the windward is narrower than that to leeward, it has greater depth, ranging from eleven to twelve fathoms. The second port is that of Barreros, so called from some red barrancas, visible from the sea, and which distinguish the port. From here to the Indian town of Roata is two leagues. This town, and that of Masa, were also burned by the Dutch; the last in July, and the first in September of this year.

The Indians, though few, are good, less easily reduced than those of Guanaja, especially those of Roata, who are laborious and faithful. In both towns the inhabitants suffer much from musquitoes, and are greatly reduced in consequence, notwithstanding the island is as fertile as Guanaja, yielding the same fruits and dye-woods.

The third inhabited island is Utila, distant about five leagues from Guayama, and of about the same size. It is in lat. $16^{\circ} 20'$ N. It is covered with trees, and on the east has a round mountain, which slopes to the west; and more to the southeast it has a small promontory, called las Palmas, from the palms growing on it, and at a short distance another larger, to the leeward of which about two leagues there is a good port; the entrance, however, is obstructed by some reefs. Within these there is anchorage in from eight to ten fathoms. This port extends parallel with the larger promontory southwest, and with that of las Palmas nearly north and south. To the southeast of this island are six cays, covered with trees, the intervening

sea being shallow ; and one league to the south of the western extremity of the island are two cays and many shallows, on which the sea breaks. Besides these there is another great shoal, called Samedina. The western part of the port of Utila is nearly north of the site of the abandoned town of Munguiche, on the coast of the main land.

This island of Utila has as many as twenty-two tributary Indians, who are *encomendados* of Andres Martinez de Zuñiga. From the excellence of its port, this island is frequented by our enemies ; and lately, in the month of September of this year, the entire town was burned by the Dutch, who, with a sloop and small coaster, in the months of July and August, made a reconnaissance of the coasts and islands of Honduras, landing in Puerto de Cavallos, and penetrating even to the warehouses, having with them persons who were able to show them the way. They went from these to the mouths of the rivers Ulua and Omoa, when a Spaniard, who discovered them, collected some Indians, who threatened them with their arrows from the shore, in consequence of which they did not land, but went to Point Manarique, and encountered the vessels which were there discharging. They next sailed to Gulfo Dulce, leaving the coaster at its mouth, and entered with the sloop, with at least twenty men ; but at the sound of the drums and arquebuses of the vessel of Captain Francisco de Santillan, they pretended to strike their flag, and by this trick captured one of Captain Santillan's men who came off to them, whom they tortured with fire. And these corsairs, who were Dutch and Flemings, examined their prisoner, and took down his declarations in writing ; and, having cured him, they put him in an open canoe, to return to the Gulf of Dulce. The canoe was lost, but the man escaped. The corsairs then went to the port of Utila with the two vessels above-mentioned ; the sloop, it is said, carrying as many men as it could hold. After they had anchored, there arrived at the port the cacique of the island, and a free negro named Matheo Mandador, but who calls himself Matheo de Velasco ; and as rowers of the canoe in which they came were two Guanaja Indians, one named Alonzo, grandson of the cacique of Guanaja (who, when he disembarked, went straight to the enemy), and the

other named Juan Redondo. These people were sent from Munguiche by Andres Martin, as *encomendero* of the island, to obtain cassava. When they found the enemy in the port, they hid their canoe in a nook, and landing, went into the woods, not, however, without seeing the village, which was then undisturbed, and in which they saw some of the Dutch wandering about without arms; but they saw no Indians, because these had retired inland to their corn-fields, whither also these Indians went with the negro, excepting, however, the said Alonzo, who went to the enemy. Next morning he appeared with not far from forty men, armed with pistols and pikes, who surrounded the Indians, and sought to kill the negro, who, however, with the Indian Juan Redondo, escaped, and returned to Munguiche, with nine others, in the canoe, and from thence they all went to Truxillo, where their declarations were taken. The enemy took the cacique of Utila, and kept him five days and nights on board the sloop, confining him during the night in chains. He saw on board the vessel an *alcalde* named Mexia, and another Indian of Guanaja, who said they were forced to come on board, and were kept below; but the aforesaid Alonzo was free. And during the five days of imprisonment, one of the corsairs, called Pedro, who spoke Spanish, and who declared he was a Catholic, said that he had been at the island before, and spoke of the events in the Gulf of Dulce, explaining that the sloop and coaster would sail to the Isle of Pines and coast of Havana, to join other vessels of their company, which were coming with large re-enforcements to aid in a general attack on the coast of Honduras during Lent of the coming year, 1640. And having put on shore the cacique, before hoisting sail the enemy burned the town of Utila, with its church; all of which is attested by the declarations of said cacique and of a *regidor* of the same island, by the negro Matheo, and Juan Redondo of Guanaja, all of whom are *Ladinos*, in the Castilian language.

From this island of Utila these corsairs went to Roata and burned that town, and thence to the port of Truxillo, anchoring off Punta Castilla for four days, whence, about the middle of September, they set sail in the direction of Guanaja, since which time nothing has been heard of them.

Such is the actual state of these islands, their capacities and their population, their demarcations and qualities, set forth in order that they may be populated or depopulated without delay.

Although De Avila refrained from making any recommendation on the subject, the *depopulation* of the islands was nevertheless resolved on and effected in 1642, when all the Indians except a few stragglers were carried off to the main land.

This movement was made none too soon; for, not satisfied with their depredations on the sea, the pirates, emboldened by success, began to make descents upon the land, and captured, pillaged, and burned almost every accessible city or town on the Spanish Main. They organized a system of land piracy, in many respects more terrible than that which they had practiced on the ocean. They made excursions into Costa Rica, Nicaragua, Honduras, and Guatemala, as well as in the frontier provinces of New Granada and Mexico. They even made permanent stations at various secluded places on the main land and on the adjacent islands, where they rendezvoused after their various expeditions, to divide the spoils, refit, and organize for new adventures. Bluefields and Cape Gracias á Dios on the Mosquito Shore, and that part of Guatemala now called Belize, were favorite localities with these outlaws. Bluefields and Belize both derive their names from pirate chieftains.*

But the withdrawal of the Indians from the Guanas did not have altogether the effect anticipated and desired. The excellent harbors, fine climate, and natural resources of those islands pointed them out as a convenient and commanding station for the freeboot-

* Bluefields from Bleeveldt, a Dutch pirate, and Belize (*Balis* or *Walís*) from Wallace, a Scotch freebooter.

ers, and immediately after their evacuation in 1642, English detachments of that honorable fraternity established themselves on both Roatan and Guanaja. "These positions," says the historian Juarros, "were exceedingly advantageous to them, and proportionately injurious to the Spaniards, because, being near the main land, the pirates were enabled to make their descents whenever they pleased, and with equal facility intercept the commerce between the kingdom of Guatemala and Spain." The annoyance from this source finally became so serious that the Viceroy of Guatemala, the Governor of Havana, and the President of the Audiencia Real of San Domingo, united in fitting out an expedition to expel the English from this stronghold. The expedition consisted of four ships of war, under the command of Francisco Villalva y Toledo, who endeavored to surprise the pirates, but failed in the attempt. He found the harbors fortified, and was obliged to bear away to the main land for reinforcements. He subsequently returned, and in the month of March, 1650, after some hard fighting, succeeded in driving the freebooters from the island.

The Spanish regained possession of the islands only to find them a waste, and they seem to have remained deserted, or occupied by only a few planters and soldiers, until 1742, when the English entertained and attempted the project of obtaining possession of the whole Atlantic coast of Central America. In furtherance of this plan, they forcibly seized upon several important points of the main land, captured Truxillo, and made establishments and erected forts at the mouth of Black River. They also occupied Roatan, and fortified it with materials carried off from Honduras. These events, in conjunction with others, led to a war

with Spain, which lasted until 1763, when a treaty was concluded, the seventeenth article of which provided that "*his Britannic majesty shall cause to be demolished all the fortifications which his subjects have erected in the Bay of Honduras, and other places of the territory of Spain in that part of the world, within four months,*" etc., etc. The forts at Black River and at other places were accordingly evacuated early in 1764. But, in violation of the treaty, the English seem to have continued their occupation of Roatan. They also kept up relations of an improper nature with the Indians on the coast, and engaged largely in smuggling, and in employments closely allied to piracy, which so exasperated Spain that in 1780 she once more declared war. The events which followed, so far as they concern these islands, are thus narrated by the Bishop Pelaez :

"On the 24th of September, 1781, advices reached Truxillo, which were immediately communicated to the government at Comayagua, that certain negroes and others, to the number of about 300 men, had constructed three forts at the entrance of the principal port of the island of Roatan, armed with 50 guns, and that three armed vessels cruised in the neighborhood, the object of the whole being to intercept the ships plying between the kingdom of Guatemala and Cuba. It was reported that these freebooters had 3000 barrels of provisions for their support, and that their object in holding the port was to make it a refuge for their vessels, which were no longer allowed to go to Jamaica.

"When this information reached Guatemala, the President Galvez made arrangements to expel the intruders. He called out the militia of Amatitlan, Zacatepeque, Chiquimula, Santa Ana, San Salvador, Nueva Segovia, Leon, Olancho, Tegucigalpa, and Comayagua. The company from Leon numbered 200 men, under the command of Colonel Don Josef de Navas ; San

Salvador sent 300 men, and Santa Ana 200; and Don Miguel Machado, of Gracias, headed 200 men, equipped at his own cost.

“In the mean time, two Spanish vessels of war, the Santa Matilda and Santa Cecilia, of the royal navy, with a sufficient number of *piraguas* from Bacalar, arrived at Omoa, and the forces above mentioned, under the command of Galvez himself and his lieutenant Estacheria, embarked on the 2d of March, 1782. They steered direct for Roatan, and at once attacked the forts erected to command the principal harbor. After a heavy cannonade, detachments of the troops landed and opened regular trenches against the forts, which were so closely invested and hotly pressed that on the 16th of the month they surrendered at discretion. The lives of the defenders were spared, but all their dwellings, to the number of 500, were destroyed.” Galvez then sailed for Truxillo, “more,” says the Bishop Pelaez, “to see that noble port, and enjoy its happy climate, and view the remains of a city capable of being the capital of an empire and the centre of commerce, than for any military purpose.”

The impressions of his visit were such, that he wrote on the 17th of April, exclaiming “that it was a port of such capacity and salubrity that it should be made the principal dépôt of Spain on the North Sea, and the seat of the audiencia. The coast,” he said, “was the most fertile of all those with which he was acquainted; its mountains the most luxuriant, full of valuable woods and trees of cacao.”

It should be mentioned that the English also had establishments in the islands Guanaja and Morata, all of which were captured by Galvez, and the prisoners exchanged at Havana. Only a few negroes, who fled to the swamps of Roatan, escaped.

The treaty of peace of 1783 between Great Britain and Spain, with, it would seem, a special reference to these islands, provided not only that the English should

abandon the continent (except a certain well-defined territory, in which they might cut logwood, and nothing more), but "*all islands whatever dependent upon it.*" The English evading the stipulations of the treaty, Spain insisted on more stringent terms, which were incorporated in the treaty of 1786, by which it was provided that the English should "*evacuate the country of the Mosquitos, as well as the continent in general, and the islands adjacent, without exception.*" Nothing could be clearer or more explicit than this; and it seems that, failing to find any means of evading the provision, England did really abandon, not only the islands, but the whole coast.

In the year 1796, however, the Caribs of San Vincent, one of the Leeward Islands, being generally attached to the French interest, gave so much trouble to the English authorities and inhabitants that it was resolved to deport them *en masse*, and they were accordingly carried, to the number of several thousands (according to some authorities 2000, according to others 5000), and landed in a body on the island of Roatan. The cost of the deportation was nearly a million sterling. It is not clear whether the English meant to reserve their dominion over the Caribs, or only desired to get rid of them permanently. The Captain General of Guatemala, regarding the movement in the light of an invasion, directed the Intendant of Honduras to effect its resubjugation. Accordingly, Don José Rossi y Rubia, well supported by officers and men, was sent to the island, which surrendered without resistance. The Caribs, so far from regarding the Spaniards as enemies, appear to have received them as friends; and most, if not all of them, under the invitation of the government of Honduras, emigrated to the main land,

establishing themselves near Truxillo, and at other points, whence, greatly increased in numbers, they have spread along the coast westward to Omoa, and eastward to Cape Gracias á Dios, where they now constitute a most industrious and valuable population.

In whatever light the movement on Roatan may be regarded, it is certain no further attempt was made by Great Britain or any other power to interfere with the islands during the eighteenth century. On the contrary, they seem to have remained in the undisturbed occupancy of Spain. In 1806 they were visited by Captain Henderson, commander of the forces at the British establishment of Belize, who testifies that a Spanish garrison was then maintained on the island of Roatan, more, probably, as an evidence of sovereignty than for any other purpose.*

At the time of Central American independence in 1821, the neighboring islands were dependent upon and under the jurisdiction of the province of Honduras. When that province assumed the rank of a state, they passed within her jurisdiction, and were occupied by her without dispute or hinderance from any quarter. Her title to them was clear and unquestioned, and she exercised over them freely all the rights of sovereignty.

In May, 1830, however, the Superintendent of the British Settlement of Belize, it is supposed as a measure of coercion against the Central American Republic, made a descent upon Roatan, and seized it upon behalf of the British crown. The federal authorities dispatched an immediate and energetic remonstrance to the British government, by which the act of seizure was

* "The island of Roatan, as has previously been remarked, belongs to Spain, and a military station is retained on it."—*Henderson's Account of Honduras, etc.*, p. 204.

tacitly, if not formally disavowed. The superintendents of Belize nevertheless seem to have kept a longing eye on the island, and to have watched eagerly for a plausible pretext to place it under their own jurisdiction. No such pretext was offered until 1838. In that year a party of liberated slaves from the Grand Cayman Islands came to Roatan to settle. The commandant, Don Juan Bta. Loustrelet, who was stationed at Port Royal with a sergeant's guard in charge of a number of convicts, informed them that foreigners wishing to settle on the island were required by the laws of Honduras to apply to the state government for permission. A portion of the immigrants made the requisite application, but another portion refused to do so, and at once appealed to the Superintendent of Belize, Colonel Alexander Macdonald, for his support. This officer shortly after made his appearance in the British sloop of war "Rover," landed forcibly at Port Royal, ran down the Central American flag, and hoisted that of Great Britain. No sooner had he re-embarked than the commandant again put up the flag of Central America, whereupon Macdonald again went on shore, seized the commandant and his soldiers, and carried them over to the main land, threatening them with death if they ventured to return.*

* The particulars of this outrage are thus related by Young:

"A British sloop of war appeared off the port; a boat full of men was dispatched to the shore, the Central American flag hauled down, and that of Old England planted in its place. Shortly after the vessel set sail the commandant pulled down the English colors and hoisted his own, which was no sooner observed than the vessel put back, and landed a party of seamen and marines. The Central American flag was lowered, and two or three of the middies amused themselves by dancing on it. The commandant and his soldiers, notwithstanding his vociferous protestations, were put on board the vessel, and had the mortification of seeing, on their departure, the meteor flag of Old England waving in the breeze. They were landed on the beach at Truxillo, with a few gentle hints as to their future behavior."—*Young's Narrative of a Residence on the Mosquito Shore*, p. 147.

The Republic of Central America, in the mean time, had been dissolved, and the State of Honduras was too feeble, and too much distracted by internal factions, to make any resistance to this aggression. It nevertheless protested energetically against the invasion, but its communications do not appear to have been answered. Macdonald, in the *interim*, had made himself so obnoxious to all the Central American states that the British government found it politic to remove him. This was done in 1843, when Colonel Fancourt was appointed in his place. This gentleman, it is presumed, was instructed to preserve greater moderation than his predecessor; at any rate, the government of Honduras thought the occasion favorable to renew its representations concerning the unjust and piratical seizure of Roatan. It therefore addressed a letter to Colonel Fancourt complaining of Macdonald's conduct, and requesting the immediate surrender of the island; to which that officer replied in polite but general terms, evading all responsibility by referring the latter to the British government. The result was an instruction forwarded to Mr. Chatfield to acquaint the government of Honduras that when Colonel Macdonald hauled down the flag of that state in Roatan, it was *by order* of the British government.

It does not by any means appear that, in thus assuming the responsibility of Macdonald's violence, Great Britain pretended to territorial rights in the Bay Islands; and certainly the seizure, made in time of profound peace, could not be understood as conferring a title to sovereignty. At any rate, no act of sovereignty followed on the proceedings of Macdonald. Meanwhile the Cayman Islanders, attracted by the superior soil of Roatan, continued to establish themselves there, so that,

in the course of a few years, the population, by increase and immigration, amounted to upward of a thousand. For some time they appear to have been without any form of government, living in very primitive style; but with the increase of inhabitants they organized a kind of council, and elected its members from among themselves. This condition of things did not escape the watchful eye of the Belize superintendent, who, as the Cayman Islanders were British subjects, failed not to discover here some kind of pretext for assuming the control and sovereignty of the islands. He seems to have informed the inhabitants at various times that, as English subjects, he should be glad, if they desired it, to nominate magistrates in the island to keep the peace between them; that he did not claim the authority to interfere in their local affairs, but that he was willing to do so on their application to that effect. The islanders, however, preferred to elect their own magistrates, the principal of whom was a Mr. Fitzgibbon, a citizen of the United States. It was not until the commencement of the year 1849 that they "applied" to Colonel Fancourt "to establish a regular form of government in the island!" This was certainly a very adroit and plausible way of consummating the violence of Macdonald.

Colonel Fancourt, upon this application, recommended to the inhabitants to choose twelve representatives to form a legislative assembly for the enactment of laws, etc., subject to his veto. He nominated five magistrates, but in a short time the people grew dissatisfied with their conduct, and elected others. The Superintendent declared that this was an encroachment on the prerogative of the crown, and, unless they submitted to his nominees, he should withdraw her majes-

ty's protection. They respectfully informed him that, being a non-resident, and unacquainted with the qualifications of individuals, he ought to allow them the privilege of electing municipal authorities.

Under this state of things, that portion of the inhabitants which was desirous of being taken under British protection drew up a petition soliciting the appointment of a stipendiary magistrate, and pledging their honor to raise a sufficient revenue to pay his salary and contingent expenses.

The condition of affairs existing at this time, *i. e.*, 1850, is thus described by Captain Mitchell, R. N., from which it appears that neither the people themselves nor the British government regarded Roatan as under British authority.

"The people aver that they are quite ignorant under what government they are placed, and whether her majesty's Superintendent at Belize has any authority over them; they are desirous of knowing in what position they are regarded. Some discontented people, such as are found in all communities, have poisoned the minds of others, inducing them to collect together and appoint magistrates in opposition to those recommended by his excellency the Superintendent of Belize.

"At times the island has been (from their not knowing their exact position, and from the influence of the discontented) without any sort of government, every man fearing for himself and what he possessed. Such was the state of things when I arrived; they have now elected magistrates, from universal suffrage, to act until the pleasure of the Governor of Jamaica shall be known, to whom they have sent a petition."*

To make their petition as imposing as possible, it is alleged that the partisans of a British protectorate added to it the names of the children at the school of the

* Statistical Account and Description of the Island of Roatan, by Commander R. C. Mitchell, R. N., *United Service Magazine*, August, 1850.

Wesleyan Mission, and resorted to other expedients of a similar kind to swell the dimensions of the document, which was sent to the Superintendent of Belize for transmission to the British Secretary of State for the Colonies. In consequence, Captain Jolly, of the British Navy, was ordered to Roatan by Sir Charles Grey, Governor of Jamaica, to ascertain of the inhabitants whether, if the government appointed a paid magistrate in the island, they would consent to pay a land-tax of a shilling an acre to the British crown. To this proposition, commended by the guns of a vessel of war, and a variety of other influences equally potent, it is not at all surprising that the inhabitants gave their consent.*

* The facts contained in the following protest of the popularly elected chief magistrate of the island, made on this occasion, have never been disputed, and must be accepted until disproved.

Protest against the Occupation of the Islands of Roatan, Bonacca, Utila, Barbarat-ta, Morat, Elena, etc., by the British Government.

Whereas, in the month of August last past, Lieutenant Jolly, commanding H. B. M.'s war schooner *Bermuda*, took formal possession of the above-named islands in behalf of the British crown, declaring them to be an English colony, under the title of the "Colony of the Bay Islands," and gave unto certain individuals a commission to act as magistrates:

I, William Fitzgibbon, chief justice of the said islands, as elected by the people, and acting chief magistrate, as provided for by the Constitution (adopted by the people) in the absence of John James Hall, Esq., the chief magistrate, do most solemnly protest, in the name of the sovereign State of Honduras, whose territorial right is indisputable, and in the name of the local authorities of these islands, against the said occupation, and declare it to be illegal, unjustifiable, and an act of usurpation against existing treaties, as follows:

1st. Because the said occupation is made in defiance of the publicly expressed wishes of the settlers, as given by them at a public meeting held at the court-house, Roatan Island, at the request of the said Lieutenant Jolly, upon which occasion *two votes only* were given in favor of British occupation, viz., Uin Elwin and Thomas Hilton, while the remainder of the meeting, consisting of all the principal settlers, voted against the measure.

2d. Because the letter purporting to have been addressed to Sir Charles Grey by the settlers, and upon which the act of occupation is grounded as a right, was never presented for signature at a public meeting, as required by the local laws of these islands, but was written by the aforesaid Uin Elwin, who, by threats and

Colonel Wodehouse, of Ceylon celebrity, had meanwhile been appointed Superintendent of Belize. One of his earliest acts was to visit Roatan in person. He proceeded there in her majesty's brig of war "Persian," and calling together a "general meeting," on the 10th day of August, 1852 (more than two years after the ratification of the convention of Washington of July 5th, 1850), formally occupied Roatan and the adjacent islands on behalf of the British crown, and declared them annexed to the Superintendency of Belize, under the style of the "Colony of the Bay Islands."

The royal warrant for the erection of these islands as a colony under the above title bears date March 20, 1852, and sets forth that, "Whereas it hath been represented unto us that the said islands are inhabited by divers subjects of our crown, who are rapidly increasing in numbers, we have therefore deemed it expedient to make provision for the government of the settlement or settlements already formed or to be formed in these

intimidation, obtained *fourteen* signatures out of a population of about 1800; and afterward affixed, or caused to be affixed thereto, the *names of the children attending the Methodist and Baptist schools*, and forwarded the same to Colonel Fancourt, the British Superintendent at Belize, declaring it to contain the writes of *ALL* the inhabitants, *except a few malcontents*.

3d. Because the said occupation is made in open violation of the solemn treaties entered into with Spain, and subsequently confirmed to the confederated States of Central America, and after repeated abandonments of the said islands by the British government, who disavowed the acts of its agents on the occasion of former occupation.

4th. Because, by a solemn treaty entered into between the United States and Great Britain in the month of April of the present year, 1850, and confirmed and ratified by both governments on the 5th day of July last past, neither power could establish colonies or settlements, or erect fortifications in any part of Central America; and as, on the dates in question, the British government had not a *solitary representative* in these islands, the government being vested in officers elected by the people, the occupation is now made in open violation of said treaty.

Given under my hand and seal, at Roatan, this 15th day of September, in the year of our Lord one thousand eight hundred and fifty.

WM. FITZGIBBON, Chief Justice and Acting Chief Magistrate.

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islands, and they are therefore, with their dependencies, hereby erected into a colony," etc. The Governor of Jamaica is made equally the governor of the new colony, which is to have a General Assembly of twelve persons, "who shall be able to read and write," three to be elected annually, whose duty, in concurrence with the governor, is defined to be, "to make, constitute, and ordain laws, statutes, and ordinances for the public peace, welfare, and good government of our said colony," etc., etc. The governor is invested with a negative on the enactments of the assembly, and furthermore authorized to prorogue or dissolve it at his discretion. He has also the power to appoint a lieutenant governor of the colony, which post has uniformly been devolved upon the Superintendent of Belize.

The proclamation of these islands as a British colony attracted immediate attention in the United States, where it was universally regarded as a direct violation of the convention of July 5, 1850, between the United States and Great Britain, in relation to Central America, which provides that "*the governments of the United States and Great Britain, neither the one nor the other, shall ever occupy, or fortify, or colonize, or assume or exercise any dominion over Costa Rica, Nicaragua, the Mosquito Shore, or any part of Central America.*" The matter was brought under the attention of Congress, and the Committee on Foreign Relations of the Senate, after a full consideration of the subject, reported "*that the islands of Roatan, Bonacca, Utila, etc., in and near the Bay of Honduras, constitute part of the territory of the republic of Honduras, and therefore form a part of 'Central America;' and, in consequence, that any occupation of these islands by Great Britain is a violation of the treaty of July 5, 1850.*"

Expostulations to this effect were at once addressed by the American government through Mr. Buchanan, its minister in London, to that of Great Britain, resulting in an elaborate correspondence, which has been published equally by both governments. On behalf of Great Britain, some faint pretensions were put forward to rights acquired by the proceedings of Macdonald and his predecessors; but the principal points insisted on by Lord Clarendon were, first, rights acquired in virtue of the "spontaneous settlement by British subjects of unoccupied territories," and, second, that the islands were and had always been "dependencies of Belize." These points were ably contested by Mr. Buchanan, who insisted that there never had been such a lapse in the exercise of Spanish, and, after Spanish, of Central American authority over the islands as to justify their being regarded as unoccupied territory, open to spontaneous settlement; and that they were remote from Belize, while adjacent to Honduras, and could not, therefore, be regarded, in a geographical or political sense, as dependencies of that establishment, the dependencies of which were, moreover, fixed by the treaty with Spain of 1786, which treaty reserved the sovereignty of Belize itself to the Spanish crown. Subsequently to Mr. Buchanan's departure, the second claim advanced on the English side was effectually overthrown by the production, under call of the House of Commons, of an official letter from Sir George Grey, Secretary of State for the Colonies, dated November 23, 1836, and addressed to S. Coxe, Esq., defining the boundaries and enumerating the dependencies of Belize.* The bound-

* Copy of a letter addressed by the Under Secretary of State for the Colonies, in November, 1836, to S. Coxe, Esq., defining the boundaries of the British settlement of Belize:

aries therein laid down, in their widest extension, did not approach within sixty miles of any of the Bay Islands, none of which were enumerated among the dependencies of the establishment. (See *Appendix*.)

“Downing Street, 23d November, 1836.”

“SIR,—I am directed by the Secretary of State to acknowledge the receipt of your letter of the 17th instant, inquiring, on behalf of the Eastern Coast of Central America Company, “what are the boundaries claimed by his majesty’s government for British Honduras, or Belize,” and I am to acquaint you, in answer, that the territory claimed by the British crown, as belonging to the British settlements in the Bay of Honduras, extends from the River Hondo on the north to the River Sarstoon on the south, and as far west as Garbutt’s Falls on the River Belize, and a line parallel to strike on the River Hondo on the north, and the River Sarstoon on the south. The British crown claims also the waters, islands, and cays lying between the coast defined and the meridian of the easternmost point of Light-house Reef.

“I am, at the same time, to warn you that the greater part of the territory in question has never been the subject of actual survey, and that parties who should assume the topography of the remoter tracts, and especially the course of the rivers, upon the authority of maps, would in all probability be led into error.

“I have, &c. (Signed), GEO. GREY.”

M O S Q U I T O S H O R E .

CHAPTER XXVIII.

EXTENT—HISTORY—CONTESTS BETWEEN SPAIN AND GREAT
BRITAIN—PRETENDED CESSION—EVACUATION BY THE
ENGLISH—BRITISH PROTECTORATE—DISPUTE WITH THE
UNITED STATES—SAN JUAN—POPULATION—CLIMATE, ETC.

MOSQUITO SHORE, Mosquito Coast, and Mosquitia, are terms used to distinguish a portion of the eastern coast of Central America fronting on the Sea of the Antilles, or Caribbean Sea. As geographical, and still more as political designations, they have been very vaguely applied to an extent of coast varying from two hundred to five hundred miles in length, and of indefinite breadth. It has at times been pretended that the Mosquito Shore embraced the entire littoral of Central America between Cape Honduras, near the port of Truxillo, in lat. 16° N., long. 86° W., and Boca del Toro, in Chiriqui Lagoon, in lat. 9° N., and long. 82° W., a coast-line of about seven hundred statute miles. Such were the pretensions made by Lord Palmerston in his instructions to the British representatives in New Granada and Guatemala in 1848. Up to that period, however, and among geographers generally, the Mosquito Shore was understood only as comprehending the coast lying between Cape Gracias á Dios and Bluefields Lagoon, including the latter; that is to say, between the twelfth and fifteenth degrees of north latitude, a dis-

tance of about two hundred miles. The attempts which have been made to apply the name to a greater extent of shore have had their origin in strictly political considerations.

This coast was discovered by Columbus in his fourth voyage, in 1502. He sailed along its entire length, stopping at various points to investigate the country, and ascertain the character of the inhabitants. He gave it the name of *Cariay*, and it was accurately characterized by one of his companions, Porras, as “una tierra muy baja,” a very low land. His son, Fernando Columbus, described the inhabitants as “almost negroes in color, bestial, going naked; in all respects very rude, eating human flesh, and devouring their fish raw as they happened to catch them.” The language of the chroniclers, however, warrants us in believing that this description applied only to the Indians of the immediate sea-coast, and that those of the interior were then, as they still remain, a different people, with a distinct language.

The great incentive to Spanish enterprise and conquest in America was the acquisition of the precious metals; and, as but little of these was to be found on the Mosquito Shore, the tide of Spanish adventure swept by that coast, heedless of the savages who found a precarious subsistence among its lagoons and forests. It is true, a grant of the entire coast, from Cape Gracias to the Gulf of Darien, was made to Diego de Nicuessa, for purposes of colonization, within ten years after its discovery, but the expedition which he fitted out to carry it into effect was wrecked at the mouth of the Cape, or Wanks River, which, in consequence, and for many years, bore the name of *Rio de los Perdidos*. From having lost a boat on the bar at its mouth, Columbus had previously called it *Rio del Desastre*.

Although the attention of Spain was too much absorbed with the other parts of her immense empire in America to enable her to devote much care to this comparatively unattractive shore, nevertheless her missionaries, with the characteristic zeal of that early period, penetrated among its people, and made various feeble attempts to found establishments at Cape Gracias á Dios, and probably at other points on the coast. But the resources of the country were too few to support the latter, and the Indians themselves too debased and savage to receive the teachings of Christianity, which to this day have failed to produce an impression on their character.

In the year 1576, this coast was conveyed by royal cedula to the "illustrious Señor Licenciado Diego Garcia de Palacios, Oidor of the Royal Audiencia of Guatemala," and "Captain Diego Lopez, resident of the port of Truxillo," in Honduras, by them to be colonized and governed under certain explicit regulations. This cedula may be found in the general archives of the Indies at Seville in Spain, among the papers brought from Simancas, Roll No. 12 of those entitled "Buen Gobierno de Indias." A copy also exists in the "Depósito Hidrográfico" at Madrid. It is chiefly interesting as showing the antiquity of the claim to sovereignty, founded on the acknowledged right of discovery set up by Spain over this shore, but within a few years called in question.

It does not appear that Palacio took any action under his grant, and the coast remained in its primitive condition until the era of the buccaneers, who obtained practical control of the Sea of the Antilles about the middle of the seventeenth century. The intricate bays, creeks, and rivers of this coast furnished admirable

places of concealment and refuge for the small and swift vessels in which these freebooters roved the seas. They opened permanent relations with the natives, and made establishments at Cape Gracias and Bluefields, whence they darted out like hawks on the galleons that sailed from Nombre de Dios and Cartagena, laden with the riches of Peru. Indeed, *Bluefields*, the so-called capital of the Mosquito kingdom, derives its name from *Bleevelt*, a noted Dutch pirate, who had his rendezvous in the bay of the same name. In like manner, it is alleged, was the name of Wallace, a Scotch sea-rover, transformed, by Spanish pronunciation, to Balice, and finally Belize.

The piratical establishment at Cape Gracias seems to have been not only the principal one on the Mosquito Shore, but in the entire Caribbean Sea. It is oftenest mentioned in the narratives which the pirates have left us of their wild and bloody adventures. Here they met, by common consent, to divide their booty, and agree upon new expeditions. Their relations with the Indians seem to have been friendly; the pirates, nevertheless, from their superior intelligence and numbers, taking the position of masters. They selected such of the Indian women as they preferred for their mistresses and servants while on shore, and not unfrequently carried off the males to act as hunters and fishers for them while engaged in their lawless expeditions through the Spanish Main, and on the shores of the great South Sea.

The accounts of the inhabitants of the coast, as given by the buccaneers, coincide with those left to us by Columbus and his companions. They are described as extremely indolent, "wandering up and down, without knowing or caring so much as to keep their bodies from

the rain, except by a few palm leaves," with "no other clothes than an apron tied round their middle," armed with spears "pointed with the teeth of crocodiles," and living chiefly on bananas, wild fruits, and fish.

At a very early period the Indians on the Mosquito Shore seem to have received a large infusion of negro blood, which has come to be predominant among the existing inhabitants. De Lussan, one of the fraternity of freebooters, writing in 1701, states that then Cape Gracias "had long been inhabited by *mulasters* (mulattoes) and negroes, both men and women, who have greatly multiplied since a Spanish ship, bound from Guinea, freighted with their fathers, was lost here." He affirms that these wrecked negroes were "courteously received by the Mousticks" (Spanish *Moscas*, English *Mosquitos*), who intermixed with them. He describes both the *Mousticks* and *mulasters* as "very slothful, planting and sowing but little," as having no fixed abode, "most of them being vagabonds," with no other shelter than might be afforded by a palm leaf, sleeping in holes dug in the sand.

The negroes wrecked from the Spanish slave-ship, augmented in numbers by the *cimarrones* or runaway slaves of the Spanish settlements in the interior, and intermingling with the Indian fishers of the coast, originated that mixed race now called the Mosquito Indians. Still later, when the English planters from Jamaica attempted to establish themselves on the coast, they brought their slaves with them, who also contributed to increase the negro element.

Many of the buccaneers were Englishmen, and all had relations more or less intimate with Jamaica, where, at that period of lax public morality, they often shared their profits with the authorities, in return for

such indulgences and assistance as the latter were able to afford;* indeed, it is alleged that the governors of the island were often partners in the enterprises of the freebooters. But when the protracted wars with Spain, which favored this state of things, were brought to a close, it became no longer prudent to connive at buccaneering; and as a kind of intelligence had sprung up with the Mosquito Shore, they conceived the idea of obtaining possession of it on behalf of the British crown. Various plans to this end, drawn up by different individuals, were at this period presented to the royal government, and by it referred to the governors of Jamaica. [See *Appendix*.]

But the governors of that island had themselves already taken the initiative. As early as 1687, one of the Mosquito head men or chiefs had been carried to Jamaica, for the purpose of placing his country under the protection of the British crown. Sir Hans Sloane has left us an account of how, having escaped from his keepers, "he pulled off the European clothes his friends had put on, and climbed to the top of a tree." It seems, nevertheless, that he received "a cocked hat and a ridiculous piece of writing," which, according to Jeffreys, was a commission as king, "given by his grace the Duke of Albemarle, under the seal of the island." These facts give significance to the declaration of Dampier (1710), that "the Mosquito Indians have no form of government among them, but take the Governor of Jamaica to be one of the greatest princes in the world." Robert Hodgson, writing forty years later, affirms not only that "the king has his commission or patent for

* "The King of England, to please the King of Spain, recalled some governors of Jamaica, and placed others in their room; but this did not prevent the pirates from acting as before."—*Buccaneers in America*, p. 36. London, 1704.

being called so from the Governor of Jamaica," but also that "all the other chief people have commissions (as admirals and captains) from his majesty's superintendent."

In 1740 it would appear that an attempt was made to obtain an absolute cession of the Coast to the British crown. In that year, Trelawney, Governor of Jamaica, wrote to the Duke of Newcastle, suggesting the expediency of rousing the Mosquito Indians against the Spaniards, and proposing an immediate occupation of the Coast. He represented that there were about one hundred Englishmen there, "mostly such as could live nowhere else," who might be brought together, re-enforced, and, by the help of the Mosquitos, finally induce the other Indians to revolt, "and thus spread the insurrection from one part to another, till it should become general over the Indies, and drive the Spaniards entirely out."

In pursuance of this scheme, Governor Trelawney commissioned one Robert Hodgson to proceed to the Shore, where he arrived, laden with presents, on the 8th of April, 1740. He succeeded in getting together some of the head men, including "King Edward" ("Admiral Dilly," "General Hobby," and "Captain Jumper" being unavoidably absent), and on the 16th of the month "proceeded to explain to them that, as they had long acknowledged themselves subjects of Great Britain, the Governor of Jamaica had sent me to take possession of their country in his majesty's name, then asked if they had any thing to object." No objection being made, Hodgson proceeds: "I immediately set up the standard, and reducing what I had said into articles, I asked them, both jointly and separately, if they approved and would abide by them."

They unanimously declared they would. I then had them read over again in a solemn manner, under the colors, and at the end of every article fired a gun, and concluded by cutting up a turf, and promising to defend their country, and procure for them every assistance from England in my power." Hodgson inclosed the articles to Governor Trelawney, hoping that he would "excuse so much ceremony; for, as I had no certain information whether the country was ever taken possession of before, or ever claimed otherwise than by sending them down commissions, I thought the more voluntary and clear the cession was the better." As to the king, Hodgson adds, "He is very young—I believe not twenty—and is not much observed; but, were he to be in England or Jamaica a while, 'tis thought he would make a hopeful monarch enough." After the cession, Hodgson entertained the king and his followers, not entirely to his own satisfaction, "for there always comes such a train that I should have had three or four instead of one puncheon of rum." In a subsequent letter from Chiriqui Lagoon, dated June 21, 1740, he gives a further report of his expedition, and asks for some blank commissions for a new creation of Mosquito admirals and generals, and also implores the governor to send him out some men as a guard, for he adds, "my life is in more danger from these Indians than from the Spaniards."

Previously to the mission of Hodgson, on the 28th of October, 1739, the Spanish ambassador in London had made complaints that the incursions of the Sambos and Indians of the Mosquito Shore, on the adjacent Spanish settlement, were "at the instigation and under the protection of the English of Jamaica, who have a commerce with them, and give them, in ex-

change for the captive Indians whom they purchase as slaves, fire-arms, powder, shot, and other goods, contrary to the natural rights of these people."

And here it may be mentioned, that subsequent to the era of the buccaneers, during the whole of the 18th century, and even as late as 1820, it was the constant practice of the Mosquitos to make forays into the territories of the Woolwas, Cookras, Tonglas, and other pure Indian tribes lying between the coast and the Spanish settlements, for the capture of prisoners to be sold as slaves to the traders from Jamaica. The scandal finally attracted the attention of Parliament, and was made the subject of a commission of inquiry, which reported, July 10, 1828, recommending the liberation, under certain conditions, of the Indians thus enslaved. From this cause has sprung that settled hostility which still exists between the Sambo-Mosquitos and their Indian neighbors of the interior, and which, until recently, at least, led the latter to punish with death any intercourse between their people and the hated Mosquitos.

The "cession" of the Mosquito Shore, procured, as we have seen, by Hodgson, was followed up by occupation. Several Jamaica planters settled there, and Hodgson, in reward for his services, was placed in charge of the new establishment, with the title of "Superintendent of the Mosquito Shore," dependent on the Governor of Jamaica.

In 1744 an order was issued in council dispatching a certain number of troops from Jamaica to the Mosquito Shore, and in 1748 another order for sending a supply of ordnance to the "new settlements" established there. At this time every thing indicated the purpose of a permanent occupation of the country on

behalf of the crown. The Spaniards, alarmed by these encroachments, as they regarded them, were loud in their remonstrances, and in 1750-51 threatened a forcible expulsion of the settlers, whereupon Governor Trelawney instructed Hodgson to represent to them that "the object of keeping a superintendent among the Indians was to restrain them in their hostilities against the Spaniards." The latter were deceived, or from motives of policy accepted the explanation, and even went so far as to confer on Hodgson the title of colonel for the services which he professed to have rendered them.

It was not long, however, before the settlers on the Shore discovered that the Spanish governors of the adjacent provinces of Honduras, Nicaragua, and Guatemala were making formidable preparations for their forcible expulsion. In their alarm they applied to Governor Knowles, who had succeeded Trelawney in Jamaica, who at once opened a correspondence with the Captain General of Guatemala for a suspension of hostilities until he could hear from England, whither he wrote, that the whole Mosquito affair was "a job," and that, if Hodgson were not checked or recalled, "he would involve the nation in difficulties," and that, between Spanish and English pretensions, "the Indians were so perplexed that they did not know what part to take." In fact, a little later, a number of the Mosquito chiefs went to Guatemala, and there resolved to take up arms against the English, but it does not appear that any decided acts of hostility were committed by them.

These events did not escape the notice of Spain, and were among the causes which led to the rupture, terminated by the treaty of Paris in 1763, by which Great

Britain agreed to demolish all the fortifications which she had erected, not only on the Mosquito Shore, but in "all other places in the territory of Spain in that part of the world." It would seem that the Spanish crown was not satisfied with the conduct of Great Britain under the provisions of this treaty, which were revived, and made more explicit and stringent by the subsequent treaty of 1783, which stipulated that all the "English settlements on the Spanish continent" should be abandoned. Nevertheless, on the ground that "the Mosquito Shore was not part of the *Spanish* continent, but of the *American* continent," relations were kept up with the Coast as before. This technical evasion of what Spain regarded as the clear intent of the treaty led to severe reclamations on her part, which were only settled by the supplementary treaty of 1786, which provided that

"His Britannic majesty's subjects and other colonists who have enjoyed the protection of England shall evacuate the country of the Mosquitos, as well as the continent in general and the islands adjacent, without exception," etc.; and that "if there should still remain any persons so daring as to presume, by entering into the interior country, to obstruct the evacuation agreed upon, his Britannic majesty, so far from affording them any succor or protection, will disavow them in the most solemn manner," etc., etc.

By the 14th article of this treaty, which shows its true intent, "His Catholic majesty, prompted solely by motives of humanity, promises to the King of England that he will not exercise any severity against the Mosquitos inhabiting in part the countries which are to be evacuated in virtue of the present convention, on account of any connections which may have sub-

sisted between the said Indians and the English; and his Britannic majesty, on his part, will strictly prohibit all his subjects from furnishing arms or warlike stores to the Indians," etc.

These provisions, involving so sweeping a renunciation of previous pretensions, met with serious opposition, and a motion was made in the House of Lords "that the terms of the convention with Spain, signed in July, 1786, do not meet the favorable opinion of this house." The motion was negatived, and, in the words of Macgregor, "with the most painful reluctance, and only in obedience to positive orders, the British settlers slowly and discontentedly left their plantations." Indeed, from 1786 forward, Great Britain ceased to hold any open relations with the Mosquito Indians until the decline of the power of Spain and the loss of her American possessions. In the interval, the governors of the provinces of Central America had attempted, but with poor success, to make permanent establishments on the Shore at Cape Gracias and Bluefields. They, however, erected a fort at the mouth of the River San Juan, for the protection of the port of the same name, which was made a port of entry by royal cedula in 1796.

The stringent provisions of the convention of 1786 were revived and confirmed by an article additional to the treaty of Madrid of August 28, 1814. Meantime the great Continental war withdrew all attention from the Mosquito Shore, which passed entirely out of official view. A few of the old settlers nevertheless remained on the coast, and a commerce in tortoise-shells, deerskins, and slaves was kept up with Jamaica. The traders, as a means of advancing their interests, were quite willing to humor the whims of the savage

chiefs, and, on their own authority, made out commissions for their friends, conferring the highest dignities, as well as the most illustrious names. "Lord Nelson," "Admiral Rodney," "Duke of York," and other personages of equally elevated rank and title, figure conspicuously in the accounts of adventure on the Shore which Roberts and other traders have left for our amusement and instruction. The title of king was not wanting to complete the list of Mosquito dignities; and, according to Macgregor, "a regalia, consisting of a silver-gilt crown, a sword and sceptre of moderate value," were sent out to lend a visible lustre to the name. The emblems of royalty were confided to the custody of "Jack, an old negro," who, with wise precaution, "kept them carefully concealed!"

Roberts, who was on the Coast in pursuit of his avocation as trader about the year 1820, has given a very faithful account of the Mosquitos and their political condition at that period. He speaks of a personage called "king," a young man who had been in Jamaica, "where he was semi-educated," "who reigned, but governed not," and whose authority, if not openly disputed, was divided among sundry chiefs, among whom a "Governor Clementi" was most important. This "king" is described by Macgregor as having "combined the bad qualities of the European and Creole, with the vicious propensities of the Sambo, and the capriciousness of the Indian." He was killed in a drunken brawl in 1824, and was succeeded by his half-brother Robert, who, however, was found to be too greatly in the Spanish interest to suit the trading Warwicks of Jamaica, and was accordingly deposed in favor of a Sambo, of quite a different family, who received the name of "George Frederick." What be-

came of this potentate does not clearly appear from the Mosquito chronicles; he either died or was dropped for another Sambo, called by the high-sounding name of "Robert Charles Frederick."

Robert Charles Frederick was taken to the settlement of Belize, or British Honduras, and was there duly crowned on the 23d of April, 1825. The ceremony, as described by an eye-witness, was exceedingly ludicrous. "The king was dressed in a British major's uniform, and seemed chiefly occupied in admiring his finery. After his anointing, he manifested his gratification by repeatedly thrusting his fingers through his long bushy hair, and applying them to his nose; in this expressive manner indicating his delight at this part of the service." In order to enable the head men who accompanied him to take an oath of allegiance, it was necessary that they should profess Christianity and be baptized. "They displayed total ignorance of the meaning of the ceremony, and, when asked to give their names, took the titles of Lord Rodney, Lord Nelson, or some other celebrity, and seemed grievously disappointed when told that they could only be baptized by simple Christian names."*

After these unctuous ceremonies, Robert Charles Frederick seems to have fallen into the error of supposing himself to be a real king, and, as such, in the exercise of royal liberality, moved thereunto by liberal appliances of rum, made extensive grants of lands to his trading friends, which, in some instances, carried with them the rights of absolute sovereignty. When these proceedings came to the ears of the Superintendent of Belize and of the Governor of Jamaica, in whose minds the imposing ceremony of coronation had created

* *Dunn's Central America* (1828), p. 26, 27.

a new interest in the affairs of the Mosquito kingdom, they excited considerable alarm, and an agent was sent to the Shore instructed to disallow the grants in question; and from this period we may date the revival of the old ideas of acquisition of the Mosquito Shore, which had slumbered since the convention of 1786, all through the era of the wars of Napoleon and those of the Spanish-American Revolution. Although still chiefly confined to Jamaica and its dependencies, through these they gradually reached the bureaus, if not the heads of government in England; and the traders, who for half a century had been the real masters of the coast, soon discovered formidable rivals to their power in the colonial officers of the crown in that part of the world.

A vessel of war was sent down from Belize to carry Robert Charles Frederick away from the too powerful influences of rum and gay cottons, and he was accordingly taken to Belize, and placed beneath the eye of the Superintendent of that establishment. His royal nature, however, rebelled against restraint, and he gradually pined away and died, but not until he had affixed "his mark" to a document styled "a will," in which it was provided that the affairs of his kingdom should be administered by Colonel Macdonald, Superintendent of Belize, as regent, during the minority of his heir; that Macdonald should be guardian of his children; and that, in view of the spiritual wants of his subjects, "the United Church of England and Ireland shall be the established religion of the Mosquito nation forever." This will bears date February, 1840, just one century after Hodgson had obtained the "cession" of the Shore to the British crown. One of the first acts of Macdonald, whether in his capacity as regent or as an officer under the crown does not appear, was the

appointment of Patrick Walker, his private secretary, to reside on the Mosquito Shore, and take charge and guardianship of the scions of the royal house of Mosquito. Walker at once took up his residence at Bluefields, and then, under the more imposing designation of "Mosquitia," the Shore began to assume an importance, in a political sense at least, which it had never before possessed. Walker organized a council of government, and was not slow in opening a dispute with the neighboring Central American states on the question of boundaries. Occupied with their emancipation from Spain during the ten years from 1820 to 1830, and with intestine troubles for the succeeding decade, they had not understood, or at least not appreciated, the consequences of the august ceremonial of the coronation of Robert Charles Frederick at Belize in 1825.

But now, aroused and alarmed by the proceedings of Walker, they retorted his pretensions with the keenest irony, and thinking probably that, appended to any document, the rude cross of one savage was equal in value to that of another, and ignorant as to whether the Salic law was recognized in Mosquitia or otherwise, they procured from the eldest child of Robert Charles Frederick, namely, the "Princess Inez Ann Frederick," on the 28th of October, 1847, a distinct recognition of the authority of Nicaragua over the Shore, and a queenly command to all interloping foreigners to leave the country. Meantime, it should be observed, the British agents in Central America, either under instructions or upon their own authority, warmly espoused the cause of Walker; but their correspondence with the ephemeral secretaries of the various states on the subject is hardly of sufficient importance to demand an epitome in this connection. It

is sufficient to say that it became asperous and violent as it proceeded, betraying throughout, on both sides, more zeal than logic or good temper.

The restless mind of Walker, who imagined himself a second Hastings, soon forced the quarrel beyond the consular offices of the crown into the cabinets of Downing Street; and in the same year (1847), when the recalcitrant Mosquito princess passed over to the Nicaraguan interest, he had succeeded in drawing from Lord Palmerston an instruction to all the diplomatic and other agents of the crown in Central America and the adjacent countries, requiring them to report "what authentic information they could obtain as to the boundaries claimed by the King of Mosquito," and also "what, in your opinion, is the line of boundary which her majesty's government should insist upon as essential for the security and well-being of the Mosquito state." This was soon followed up by a dispatch to the same agents, instructing them to inform the states adjacent to the Mosquito Shore that "her majesty's government could not view with indifference any encroachment on the rights or territories of the King of Mosquito, who is under the protection of the British crown." This seems to have been the first time that a "protectorate" over the Mosquito Shore was ever asserted by any important officer of the crown, or in an authoritative manner; and although Mr. Walker and Mr. Chatfield, her majesty's consul general in Guatemala, had both reported that the "well-being of the Mosquito state" required an assertion of the rights of the Mosquito king over the entire eastern coast of Central America, from Cape Honduras to Chiriqui Lagoon, an extent of 700 miles, yet his lordship limited himself to the opinion that the "right of the King of

Mosquito should be maintained as extending from Cape Honduras down to the mouth of the River San Juan."

It may readily be presumed that the instruction to communicate the views of her majesty's government upon this point to the Central American states was promptly complied with by her majesty's agents. Mr. Chatfield, not satisfied with a literal discharge of his duty, took the latitude of adding that these limits were to be accepted "without prejudice to the right of the Mosquito king to any territory *south* of the River San Juan."

An epistolary contest, of a more formal and serious character, was now commenced, and from that period we may date the origin of a complication, which, extending beyond Central America, soon came to involve the United States in its circle, and which has finally become notorious as "The Mosquito Question." In the mean time, influenced by Walker's representations, Macdonald, who was a man of action rather than words, paid a visit to the Shore in a vessel of war, entered the port of San Juan, where no Mosquito Indian had ever resided, and where the Spanish authorities had been in peaceful occupation for more than three hundred years, and, after some wild proceedings, seized the collector, Quijano, carried him off, and finally landed him, alone, at a desolate point on the coast, several hundred miles from the port. The only immediate consequences of this proceeding were vehement reclamations on the part of the Central American states, who now asserted their rights over San Juan in the most positive terms. Although Macdonald's conduct, in this as in some other matters, does not seem to have been approved by the home government, yet the question raised had now assumed such a form that an occupation of San Juan, or

an abandonment of all pretensions over it, became inevitable. The former course, after Lord Palmerston's declarations, was the only one possible; and in the month of January, 1848, two British vessels of war appeared in the harbor of San Juan, and occupied it without resistance, replacing the Nicaraguan officials by Englishmen, acting as servants of the King of Mosquito. This done, they sailed away; but no sooner did the intelligence of the event reach the interior, than the Nicaraguan government embarked a small force and reoccupied the post, sending the new officials as prisoners to the capital.* The British forces, considerably strengthened, thereupon returned. The Nicaraguans, unable to oppose them, retired up the River San Juan, and erected some rude fortifications on its banks. They were followed by an English detachment, and finally (March 12th, 1848) routed with great loss. Walker, who accompanied the expedition, was either killed or drowned during the engagement. Hostilities were further prosecuted, until the Nicaraguans, powerless against the strength of Great Britain, consented to an armistice, which provided that they should not disturb San Juan, or attempt to reoccupy the port, pending the negotiations, which, it was foreseen, would follow on these events. All efforts, however, to induce them to relinquish their claims of sovereignty over the port, or even by implication to recognize the Mosquito king, were

* "Major Robert Hodgson," who was made governor of the port, was among the prisoners. He was examined by the Nicaraguan authorities, and testified that the notes which had been addressed to the Nicaraguan government, purporting to be signed by him as "Senior Counselor of the King of Mosquitia," were not only not signed by him, but that he never before heard of them. He testified farther, that the body of the notes were in the handwriting of "Mr. W. Scott, secretary of Mr. Walker, and the signature in that of Mr. Walker himself!" Also, that the occupation of San Juan was without the knowledge of the so-called Mosquito king, and quite an affair of Mr. Walker.

unsuccessful. A consul general of her majesty was at once appointed to the Mosquito Shore, who took up his residence at San Juan, where, with the support of a number of policemen from Jamaica, and the almost constant presence of a vessel of war in the harbor, he assumed and exercised all the functions of government, judicial and executive, framed tariffs, promulgated municipal laws, punished offenders, and sold lands, without any apparent reference to Mosquito sovereignty.

The government of Nicaragua having now virtually lost its only port on the Atlantic through which its foreign commerce had been mainly carried on, addressed an exposition and appeal to the nations of Europe, and a particular and fervent one to the United States, for a friendly interference in behalf of what they claimed as their clear territorial rights and violated sovereignty. These appeals reached the United States at a time when the conclusion of the war with Mexico and the acquisition of California had given a new, and, for the first time, a really practical importance to the question of an inter-oceanic communication across the isthmus which connects North with South America. And as, for more than three centuries, the world had been accustomed to regard the line through Nicaragua, by way of the River San Juan and the Nicaraguan lakes, as affording the best, if not the only route for a ship canal between the seas, the occupation of the port of San Juan by any great maritime power could not fail to excite jealousy and alarm in the American mind. The American people and government were very naturally led to believe that the seizure of San Juan was an act of wanton violence on the rights of a weak power, directed to obtaining control of the transit between the seas, and to checking the advance of American power

on the Pacific. And when the discovery of gold in California turned a sudden tide of emigration across every point where the isthmus could be traversed, the active and enterprising men who were casting their fortunes on the western shore of the continent viewed with indignation and hostility the British flag domineering the highway between their new homes and their old.

It is not surprising, therefore, that the government of the United States directed immediate and earnest attention to the questions between Great Britain and Nicaragua, and analyzed with severity the nature of the pretensions set up in behalf of the so-called Mosquito king. The very first act of General Taylor, flushed from the fields of his Mexican victories, and carried almost by acclamation into the presidential chair, was the appointment of a diplomatic agent in Central America, invested with large powers, and instructed to look closely after the interests of the United States, especially as they might be affected by the new and startling pretensions of Great Britain on behalf of a savage tribe, without a written language, without laws, without even a distinct idea of God, and having none of the recognized attributes of a national existence.

Hardly had this agent reached his post, when, on the pretext of enforcing some claims for indemnity to British subjects against the states of Honduras and San Salvador, a detachment of the British squadron in the Pacific, having on board her majesty's consul general in Guatemala, made its appearance in the magnificent Bay of Fonseca, and forcibly took possession of the five islands commanding it in the name and on behalf of the British crown. And as, in the speculations on the question of an inter-oceanic canal, this bay had

come to be regarded as offering the best conditions for the western terminus of such a work, precisely as San Juan was assumed to offer the same for its eastern terminus, this seizure, whatever may have been its motives, was understood to be only an additional step in the settled policy of Great Britain to obtain control, if not absolute possession of the highway between the seas.

The government of Honduras, having obtained an intimation of the contemplated occupation of the Bay of Fonseca, had resorted to the expedient of making a cession to the United States of the islands commanding it belonging to that state. The author of this volume, as the American representative, accepted the cession on behalf of his government, which thus, in a direct and practical form, became a party to the disputes between Great Britain and the Central American states. The seizure having taken place regardless of the previous cession, an independent question was raised between the British and American cabinets which seemed to threaten an open rupture, but which had the really beneficial effect of directing the serious attention of both governments to the necessity of settling the principles which should govern the policy of both as regarded the Isthmus states, and especially as regarded that inter-oceanic highway to which circumstances had given a new importance. As soon as a knowledge of the seizure reached the United States, Mr. Clayton, Secretary of State, sent a dispatch to Mr. Lawrence, American minister in London (dated December 29, 1849), which he was desired to place before the British government. This dispatch set forth that "the United States had no political designs in Central America," and that its interest in those coun-

tries was confined to securing through them a free route of transit between the seas, which route it was declared to be the purpose of the United States "to protect, with the consent of the states through which it might pass." In conclusion, Mr. Clayton directed Mr. Lawrence to urge on the British government to disavow the seizure of the Bay of Fonseca, and to represent that if the act were not disavowed, the treaty of cession, by which Honduras conveyed the only important positions in the Bay to the United States, "would be submitted to the Senate for ratification without delay."

As already said, the serious attention of both governments, as well as of the people of both countries, having been thus arrested, public opinion, equally with common sense, dictated that an understanding should be reached which should not only avert the possibility of a collision on these questions, but which should best subserve the wants of trade and commerce across the Isthmus. It is not necessary to trace the progress of the negotiations which were now opened, and which, in the month of April subsequent to the date of the dispatch above alluded to, resulted in the signature of a special convention between the United States and Great Britain, known as the Clayton-Bulwer Treaty, defining the policy of both as regarding Central America, and giving a joint guarantee to such routes of inter-oceanic communication as might be opened "by canal or railway" through its territories.

A radical defect with this convention was its ambiguity on the subject of the Mosquito protectorate, and it is little creditable to its negotiators that disputes arose as to its intent and meaning before the signatures were fairly dry on the parchment. On the

one hand, it was claimed that the convention recognized and confirmed the protectorate of Great Britain; on the other, that it deprived it of all vitality, and reduced it to a shadow; and that the ambiguity of the convention was studied and intentional, to enable Great Britain to retire gracefully from a false position, without appearing to surrender pretensions which had been put forward with great decision.

While this new dispute was increasing in warmth, circumstances were fast working out a practical solution. An American company, acting under a charter from Nicaragua, had opened a route of transit for passengers through that state, commencing at San Juan, which rapidly filled up with emigrants from the United States. They soon became numerically predominant, and, after some ungraceful attempts to proceed with reference to the alleged Mosquito authority, finally, wholly disregarding that fiction, met in a primary capacity and organized an independent local government, composed chiefly of Americans. The British protectorate, so far as San Juan was concerned, expired with an attempt on the part of the commander of one of her majesty's vessels of war, more zealous than discreet, to compel one of the transit steamers to pay certain port charges to his Mosquito majesty. The act was disavowed by the British government, and San Juan remained, and has continued to remain, under the direct control of its own people, practically a free city, and as such, looking to its position, it should be established by common consent. Its prosperity was much retarded by a dispute with the adventurers into whose hands the transit had fallen, producing an irritation of feeling, which resulted in certain alleged insults on the part of the town to an American diplomatic agent,

whose belligerent tendencies led him to interfere in matters quite beyond the sphere of his duties. An American vessel of war was sent to inquire into the circumstances of the case. Her commander, acting under improper influences, assumed a most offensive and hostile attitude toward the town, and made various arrogant demands, which were not complied with, whereupon he bombarded the place, and, landing a force of marines, burned it to the ground. The annals of this century furnish no parallel to this wanton and cruel procedure, and it stands a lasting disgrace and infamy to all concerned. It is certain that no such act was contemplated by the American government; but, as it retained the delinquent officer in its service, and did not formally disavow the deed, it must be held to share the odium consequent upon it.

Previously to this event an effort had been made to adjust the Mosquito question on the part of Mr. Webster, Secretary of State, and Mr. Crampton, British representative in Washington. A project was agreed upon, assigning a defined territory to the Mosquito Indians, and surrendering the port of San Juan (then called Greytown) to Nicaragua on condition of certain annual payments to the Mosquito king. A joint English and American commission was sent to Central America to procure the assent of the adjacent states to the arrangement. Costa Rica, after some hesitation, acceded to the plan, but Nicaragua refused her assent; and the terms of the project becoming known in England and the United States, they were found to be distasteful to the people of both countries. In America it was contended that no rights beyond those of occupancy could be conceded to any of the aboriginal tribes of the continent without violation of the leading

principle on which the settlement of the continent had been effected, nor without danger to existing territorial rights.

Some of the provisions of the Webster-Crampton project were revived in a convention signed by Lord Clarendon and Mr. Dallas, American minister at London, in the autumn of 1856. The limits of the district assigned to the Mosquito Indians, however, were much more circumscribed; the port of San Juan was established as a free port, and the provisions recognizing a Mosquito sovereignty, in a political sense, carefully excluded. This convention was ratified, with some slight modifications, by the United States Senate, but failed in consequence of the non-exchange of ratifications within the time specified in the convention itself. The principles of this convention are no doubt those which will ultimately prevail, and they offer the only rational solution of the vexed Mosquito question. A better understanding of the mutual rights and duties of Great Britain and the United States on the American continent is fast removing every obstacle to an amicable adjustment of this and analogous differences. Nothing can be more certain than that the whole debased blood of the so-called Mosquito kingdom is not worth a single drop from British or American veins.

The final solution of the question will no doubt be hastened and facilitated by the convention of August 26, 1856, between Great Britain and Honduras, wherein the territorial rights of the latter state are recognized over the coast between Cape Gracias and Cape Honduras, with the reservation of the right of occupancy to the Indians within a district of reasonable extent, to be fixed by a joint commission of the two

governments. Such is the present political status of the Mosquito Shore.

As regards the Mosquitos themselves, little need be said except that they are a hybrid race, coming rather under the denomination of Sambos than Indians. The Valiente, Rama, Cookra, Woolwa, Tongla, and Paya or Poyas Indians, who are sometimes claimed as Mosquitos, are quite independent of them, and generally hold a hostile attitude toward them. Some of these tribes, in whole or in part, recognize the rule of the adjacent Central American states, and in many of their villages profess the Catholic religion. Exclusive of these Indian tribes, the population of the Mosquito Shore is exceedingly small, certainly not more than a thousand souls. Dampier (1710) speaks of them as "but a small nation or family, not exceeding a hundred men in number." Colonel Hodgson (son of the Robert Hodgson elsewhere referred to), who wrote in 1757, estimated the population "at not above 7000." George Chalmers, Secretary to the Board of Trade in 1787, drew up a series of notes on the Mosquito Shore for the use of the Board, in which he observes: "The present number of the Mosquito Indians is unknown. It happened among them, probably, as among the North American Indians, that they declined in numbers and degenerated in spirit as the white people settled among them. Like the Caribs of San Domingo, they consist of three distinct races, the aborigines, the descendants of certain African negroes wrecked on the coast, and a generation containing the blood of both. If the Spaniards earnestly desired to destroy them, they could not, I think, make a very vigorous resistance." The "Commissioners of Legal Inquiry in the case of the Indians of Honduras," 1828, describe the

Mosquito Indians as "a barbarous and cruel people, in the lowest state of civilization, hostile to the other Indian nations, who are a mild, timid, and peaceful race." When Colonel Hodgson wrote, it appears that the inhabitants of the coast were not more homogeneous politically than in blood. He says of them that then (1757) they were "not so properly a single state as three united, each independent of the others."

"I. Those who inhabit the southern extremity till Bragmans, and are mostly the original Indians; their head man is called *Governor*.

"II. Those who extend to about Little Black River, and are mostly Sambos; their chief is called *King*.

"III. Those westward, who are Indians and Sambos mixed; their head man is called *General*.

"The power of these three head men is nearly equal, with a small difference in favor of the king, who is a little supported by the whites for the sake of his name. The king has his commission, or patent for being called so, from the Governor of Jamaica."

I have before me a Spanish map of the Mosquito Shore, obtained from the "Depósito Hidrográfico" of the Spanish crown at Madrid, which throws some light on the points referred to in the foregoing paragraphs. It is entitled "*Carta, Mapa, y Descripcion de las Costas Rica, Nicaragua, Mosquitos, y Cabo de Gracias á Dios, hasta el Cabo de Camaron, con sus Bajos, Islas, Arrecifes, Ensenadas, Lagunas, Puertos, Braseage y Havitadores de ellas. Copia de un Plano Ingles, año de 1777.*"

It presents a plan of the eastern coast of Central America from Cape Camaron, near the port of Truxillo, in Honduras, on the north, to Rio Matina, in Costa Rica, on the south, embracing, of course, the river

and port of San Juan de Nicaragua. All the bays, inlets, rivers, islands, etc., are given with great minuteness, but rudely, so far as drawing is concerned. Not only are all the settlements and establishments on the coast laid down, but also the number of houses and huts, those of the whites being given with marked prominence. It contains, also, the following table, presenting not only the positions of the various settlements, and the number of houses, etc., which they embrace, but, in addition, the number of inhabitants and their classification. At the date of this map, it should be remembered, a considerable number of Englishmen from Jamaica were established on the Coast, and had taken thither their negro slaves, or had purchased captive Indians from the interior as slaves, to obtain whom the "Mosquito-Sambos" made frequent forays, almost to the borders of the Spanish settlements. It was not until the conclusion of the treaty with Spain of 1786 that Great Britain gave up her claims to sovereignty over the Mosquito Shore; for, from 1740 up to that time, she had exercised absolute dominion, and had made no pretense of a protectorate over the so-called Mosquito nation.

T T

TABLE.

This Table contains the Number of Inhabitants on all the Coast, and their Nation or Caste, in the year 1777.

Establishments.	Houses of Whites.	Houses of Mestizos.	White Men.	Mestizos.	Slaves.	Mosquito Indians.	Mosquito-Sambos.
Rio Tortuga . . . . .	..	1	..	1	7	..	..
Rio de Maiz (Corn River) . . . . .	..	..	..	..	..	8	..
Indian River . . . . .	..	..	..	..	..	6	..
Rio Punta Gorda . . . . .	..	5	..	5	25	..	..
Bluefield's River	2	..	6	3	14	..	..
Pearl Lagoon	2	2	3	5	30	30	30
Admiral Dilson's River . . . . .	..	..	..	..	..	30	..
Snuel River (?) . . . . .	..	1	..	1	5	10	..
River Walposexa	1	..	2	..	5	15	..
Rio Tongla . . . . .	..	..	..	..	..	10	..
Punta Ocovita . . . . .	..	..	..	..	..	15	..
Rio de Cazala . . . . .	..	..	..	..	..	8	..
Rios de Guagua y Santa	5	..	5	..	40	40	..
Rio Tepopi	1	..	2	..	10	..	..
Rio de Hansen . . . . .	..	..	..	..	10	10	..
River of Sandy Bay, king's house . . . . .	..	..	..	..	..	..	80
Rio de Guarnaz . . . . .	..	..	..	..	..	..	30
Rio de Cabo de Gracias	2	..	6	..	40	..	15
Rio de Atatasque, house of General Tempest . . . . .	..	..	..	..	..	..	75
Great Corn Island	1	2	1	4	15	..	..
Island of St. Andrew's	2	2	2	6	20	..	..
Island of Albuquerque or Providence	1	..	1	2	5	..	..
Totals	17	13	28	27	252	182	230

Note to the Table.—"The establishment of Piche, at the mouth of the Black River, has about 150 houses, including those of the Mestizos and Sambos, who live apart from the whites."

It will be seen that, exclusive of the establishment at Black River, there were but 719 inhabitants on the Mosquito Shore, including whites, slaves, Indians, and mixed. Assuming there were five persons attached to each house at "Pinche," or Black River, the above estimate of 150 houses would give 750 more, or 1469 in all, as the total inhabitants from Cape Camaron to Rio Matina.

The establishment at Black River was thoroughly English, and the inhabitants were chiefly planters from Jamaica and their slaves, with a slight infusion of Poyas Indians, who admitted no relationship with the Mosquitos. A fort, mount-

ing twelve guns, was established there, the ruins of which are still conspicuous. The traces of a European grave-yard, with tombstones in good preservation, and the iron kettles of the sugar estates, are still to be encountered in the forests, which have grown up since the fort was dismantled, and the settlement "slowly and reluctantly abandoned," in conformity with the treaty of 1786.

It is equally interesting and important to observe, that according to the map and table, not a single pure Mosquito Indian existed north of Sandy Bay, nor south of Corn River, which is considerably to the northward of the port of San Juan, claimed by Lord Palmerston as pertaining to the Mosquito king, and seized by British forces in 1848 on behalf of that extraordinary potentate.

The map professes to be a copy of an English plan, and has upon it several English words for which the Spanish has no equivalents, thus confirming its alleged origin. The number of inhabitants which it assigns to the Shore may seem extremely small; but it may well be doubted if the Shore now contains even this small number. It is true, the Caribs have gradually spread beyond Cape Camaron to Cape Gracias, to the number, perhaps, of some thousands; but they do not belong to the Mosquito family, nor do they recognize the so-called Mosquito king. The Poyas, Tonglas, Towkas, Woolwas, Ramas, Melchoras, and other pure Indian tribes occupying the country intermediately between the coast and the interior Spanish settlements, equally repudiate Mosquito jurisdiction, although generally included in the estimated population of the Mosquito Shore. It was against these tribes that the Mosquito-Sambos formerly carried on a predatory war for the capture of prisoners, which were sold to the Jamaica traders as slaves. Among some of these tribes intermarriage or intercourse with the Mosquitos is still punished with death.

Exclusive of the Caribs, who never recognized, and of the interior tribes, who utterly repudiate Mosquito authority, it may safely be asserted that the whole population of the Mosquito Shore, including whites, mulattoes, Indians, negroes, Sambos, and Mestizos, does not now exceed one thousand in number. Of these, probably not more than one fifth, possibly not more than one tenth, are pure Indians; the rest are chiefly Sambos, or mixed Indian and negro, the blood of the latter greatly predominating. It may be doubted if a single Mosquito Indian lives to the northward of Cape Gracias; and certainly few, if any, live to the southward of Indian River, near Bluefields.

In character and habits the Mosquitos remain much the same as when described by the pirates, living chiefly by fishing, and having little trade except in tortoise-shells and sarsaparilla.* They are without any form

* "I have never known a marriage celebrated among them. These engagements are mere tacit agreements, sometimes broken by mutual consent. The children here and at Bluefields [which, it will soon be seen, is the royal capital] are, in general, baptized by the captains of trading vessels from Jamaica, who, on their annual visit to the Coast, perform this ceremony, with any thing but reverence, on all who have been born during their absence; and many of them are indebted to these men for more than baptism. In proof of this, I could enumerate more than a dozen acknowledged children of two of these captains, who

of religion, but believe in a certain spirit of the water called *Lewire*, and an evil spirit named *Wulasha*, who consumes the bodies of the dead. They have great faith in a class of sorcerers who combine the characters of the medicine-men of the North American Indians and the obi-men of Africa, called *sukias*, whose authority is often greater than that of the most powerful chief. These pretend to cure diseases by incantations and rude jugglery, directed chiefly to appeasing *Wulasha*, who shares in the reward of the *sukia*. His half of the stipulated price, however, is always exacted in advance.

The huts of the Mosquitos are mere thatched sheds of palmetto or *cahoon* leaves, about six feet high at the eaves, and projecting three or four feet beyond the line of posts. Some of the better ones are inclosed with a stockade or fence of palmetto stalks, having the entrance in the gable. The men sleep on the sand floor or in hammocks, and the women on a rude framework of canes, raised a few feet above the ground. Their arts are confined to making *pitpans*—long, flat-bottomed canoes for use on the rivers and lagoons, and *dories*, or large canoes for coasting on the sea. They also make harpoons and implements for fishing, and manufacture a kind of cloth, or *tappa*, from the inner bark of the *ule*, or caoutchouc-tree. In language they differ wholly from the neighboring Indians, so that they are unable to communicate with them except through interpreters. From their long intercourse

seem to have adopted, without scruple, the Indian idea of polygamy to its fullest extent. By this licentious and immoral conduct they have, however, so identified themselves with the natives as to obtain a sort of monopoly of the sale of goods. They have also insinuated themselves into the good graces of some of the leading men, so that their arrival is hailed with joy by all classes as the season of festivity, revelry, christening, and licentiousness."—*Roberts's Narrative*, p. 109. Edinburgh, 1827.

with the English, they have adopted many English words, which, however, are pronounced in a very broken manner, constituting a kind of jargon. Their own language is not deficient in euphony, although defective in its grammar. It has no article, definite or indefinite, but the numeral adjective *kumi*, one, is used whenever the idea of number is prominent. The adjective follows the noun, as do also the numerals. All names are understood to be masculine, unless qualified by the word *mairén*, woman or female. The pronouns are twelve in number, but have neither gender nor number, both of which must be inferred from the connections in which they are used. The verbs have mood, tense, and person, but are wanting in number.

The geography of the Mosquito Shore is very imperfectly known. Upon the coast, however, there are several very good harbors, and positions capable of easy settlement. Bluefield's Lagoon derives its name from a Dutch pirate named Blauvelt, who had his head-quarters there during the predominance of the buccaneers in these seas. It is a considerable body of water, some thirty or forty miles in length, and almost completely land-locked. There is a bar at its entrance, with but fourteen feet of water, but within the bar it has from four to six fathoms. The great river Escondido, and some smaller streams, flow into it. On the south bank of this river is situated the town of Bluefields, the residence of the king and his English guardian. It contains nearly 500 inhabitants, including about 50 whites.* Thirty miles to the northward

* The following description of Bluefields is from a Belize newspaper of 1848. The Prussian colony or establishment, "Carlsruhe," was abandoned in 1849, with a loss of upward of two thirds of the emigrants.

"Bluefields is the capital of Mosquitia. It is situated on the river and lagoon of the same name. In the midst of the palms bordering the river is the resi-

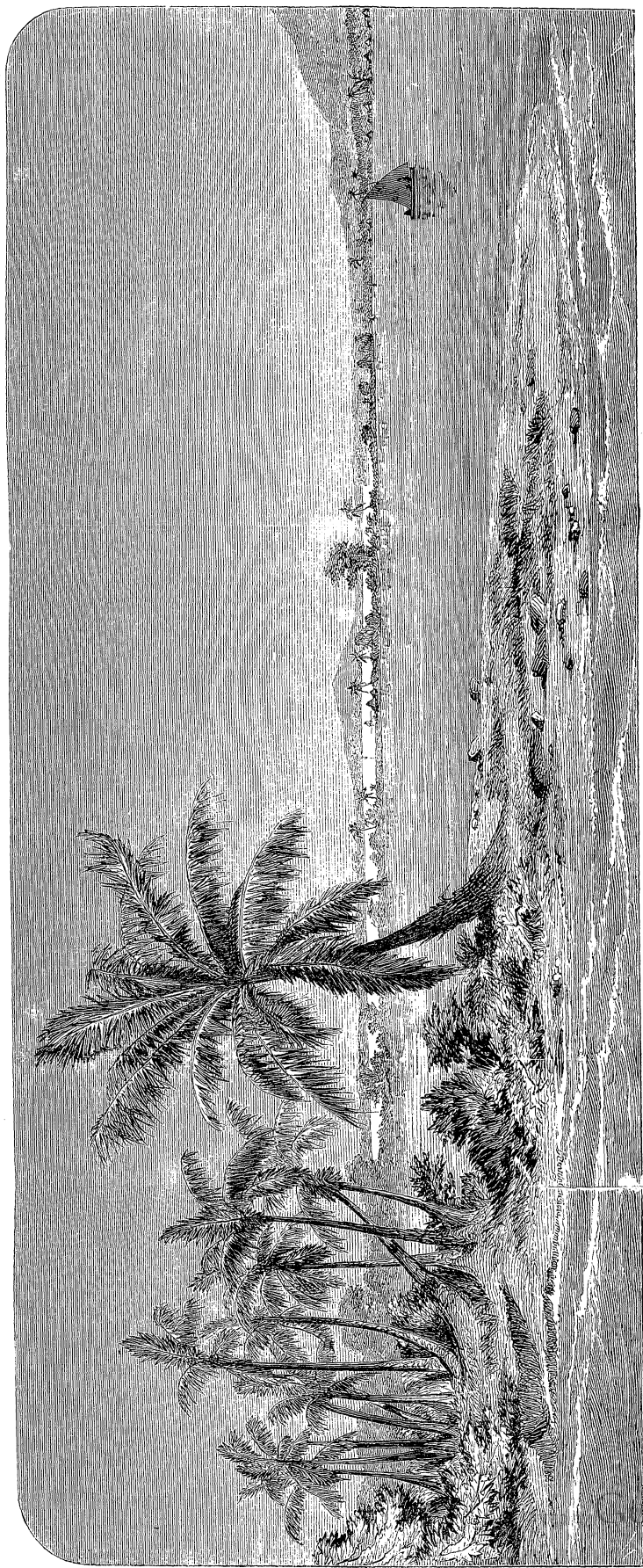
of Bluefields is Pearl Cay Lagoon, affording a tolerable harbor for small vessels. A considerable river, the Wawashaan, falls into this lagoon. Still thirty miles to the northward, a large stream, the Rio Grande, flows into the sea. Its mouth is obstructed by a dangerous bar, but, when this is passed, it is said the river may be navigated for a distance of a hundred miles inland. Further to the northward are the Prinzapulka, Tongla, Brackma, Wava, Duckwara, and other considerable streams. Next in order is the Rio Wanks, the longest, if not the largest river in Central America, which reaches the sea at Cape Gracias á Dios. Toward their sources, among the mountains of Honduras and Nicaragua, all these streams are rough and rapid, but as they approach the ocean they lose their turbulent character and flow majestically into the sea. During the seasons of the rains they usually overflow their banks, and, with the numerous creeks and lagoons, constitute a net-work of temporary lakes parallel to the sea-coast, which permit interior navigation all the way from Bluefield's Lagoon to Cape Gracias. The climate of the coast is moist, hotter than the interior, and not as salubrious, although, in the latter respect, probably entitled to rank equally high with the West India islands generally. The greater part of the soil

dence of the king, and his English tutor or guardian, over which floats the British flag. At some distance from this is the House of Justice, which is under the Mosquitia flag. Says Macgregor, 'An ensign and standard for the Mosquito nation was sent to the country from England.' In October, 1847, Bluefields and its dependencies contained 599 inhabitants, of all ages, of which 111 were whites and 488 blacks. These occupied two villages, the largest of which is Bluefields proper, containing 78 houses; the lesser, 'Carlsruhe,' the Prussian colony, consisting of 92 souls, occupying 16 houses. Very few of these houses are built of boards; but one of this kind is the residence of Mr. Walker, diplomatic agent and consul general of England, with whom his Mosquito majesty resides. There is neither church nor priest in the place; but Mr. Green, an English doctor, reads some passages from the Bible on Sundays in the House of Justice."

is fertile, and capable of producing in abundance cotton, sugar, rice, indigo, and the other tropical staples. There are some extensive tracts of open or savanna land covered with grass, well adapted for the raising of cattle. There are also certain broad, sandy plains, not fitted for cultivation, but covered with fine pines, some of them large enough for the masts of ships; and the banks of the rivers generally are covered with forests of mahogany, rosewood, caoutchouc, and other valuable trees.* Altogether, the Coast has many natural elements of wealth; but it may be doubted if its settlement by a civilized race will be effected until the equally fertile, but more elevated, cooler, and more salubrious regions of the interior and on the Pacific coast have become filled by an active and enterprising population. Their greater advantages will claim for them the first attention of emigrants, and to these alone can we look for the political and social regeneration of Central America, and for the ultimate rescue of the Mosquito Shore from its present condition of desolation and barbarism.

* The following passage is from a Memorial on the Mosquito Shore, prepared by the Council of State of Jamaica, and transmitted to the Board of Trade and Plantations in 1773:

“The climate of the Mosquito Shore is milder than any in the West India islands, and the air is more salubrious; the lands are every where well watered, and every where fertile. The soil is rich in an uncommon degree. The necessities, and even the luxuries of life present themselves on all sides. The rivers, lagoons, and sea abound in excellent fish, and the coasts afford the greatest number of excellent turtle, both for food and the shell, of any country of equal extent in the world. The cotton-tree, cocoa, and vanilla flourish spontaneously all over the country. Indigo, too, is a native, and seems to be the same with that of Guatemala, which is accounted the best of any. The sugar-cane here arrives at as great perfection as in any of the islands; and of mahogany and sarsaparilla the quantity exported annually is so great as to render the settlement already an object of no small importance to the commerce of Great Britain—no less than 800,000 feet of the former, and 200,000 pounds of the latter, exclusive of 10,000 pounds of tortoise-shell, having been shipped to England in 1769. The banks of the rivers and lagoons are equally well adapted to the growth of logwood as any part of Honduras; and we have reason to think that there is here enough to supply all Europe.”



[To face p. 665.]

PUERTO CORTEZ (LAKE CABALLOS) AND ALVARADO LAGOON, ATLANTIC PORT OF HONDURAS RAILWAY.

INTER-OCEANIC RAILWAY.

CHAPTER XXIX.

SPANISH EXPLORATIONS FOR A TRANSIT IN THE SIXTEENTH
CENTURY—HISTORICAL NOTICES.

IN the month of September, 1513, scarcely eleven years after the first landing of Columbus on the continent of America, in Honduras, Vasco Nuñez de Balboa, crossing its narrowest isthmus at Darien, rushed, sword in hand, into the waters of the South Sea, and claimed its almost limitless shores for the crown of Castile and Leon. From that period, it became a leading object of European ambition to discover “a short and easy passage” between the seas. Deeply impressed with the importance of such a communication, the great Charles, writing from Valladolid in 1523, enjoined upon Cortez to seek diligently for “*el secreto del estrecho*,” the secret of the strait, which would shorten, as was then supposed, by two thirds, the voyage from Cadiz to the “land of spices” and the shores of Cathay. In reply to this behest, the Mexican conqueror laments the failure of his search, but consoles himself with the hope that he will yet be able to achieve that grand discovery, which, he adds, “would make the King of Spain master of so many kingdoms that he might consider himself lord of the world.”

Geographical research, however, early demonstrated that to this “short and easy passage” the American

continent presents an unbroken barrier. And then the daring of man began to contemplate the Titanic enterprise of cutting through the continent, and opening an artificial water communication between the two oceans.

The kings of Spain, ruling over dominions surpassing in extent the proudest empires of antiquity, and supported by a people roused to the highest pitch of daring and of enterprise, looked with impatience upon the barrier which interposed between their ambitions and those Oriental kingdoms which their fancies had surrounded with exaggerated splendors, and invested with unbounded wealth. To overcome this obstacle became at once a ruling purpose of imperial zeal. The bravest and best of their subjects, comprehending well the rich rewards which success in this respect would be sure to secure, devoted to it all their intelligence and energy. They traversed the continent and investigated its recesses as eagerly and as thoroughly as their predecessors on the sea had scrutinized every river, and inlet, and bay, in their unavailing search for the "short and easy passage to the Indies." If we could expose to light the treasures of the Spanish archives, that mine of early American history, we should find abundant evidences that not a single point which modern research has indicated as affording facilities for inter-oceanic communications had escaped the observation of these active and indefatigable explorers. Certain it is, that within thirty years after the discovery, all the great lines of transit which are now known and recognized had been very carefully traced, and their capabilities very accurately pointed out.

"It is true," wrote the ancient historian Gomara, "that mountains obstruct these passages, but if there

be mountains there be also hands ; let but the resolve be formed to make the passage, and it can be made. If inclination be not wanting, there will be no want of means ; the Indies, to which the passage is to be made, will itself supply them. To a King of Spain, with the wealth of the Indies at his command, when the object to be obtained is the spice trade, that which is possible is easy."

But at that early period engineering science, except perhaps in its application to military purposes, was in its infancy, and under the system and with the comparatively limited mechanical appliances of the day, the task of cutting through the continent was too vast for even the gigantic power of Spain, with the spoils of a hundred conquered nations in its lap, to undertake. The swart miners of England had not yet torn up the iron ribs of the earth, wherewith to fashion implements for the hands of the, as yet, untamed spirit of fire and water, the giant steam. The kings of Spain had the will to do, but lacked the ability to accomplish. Slowly and reluctantly they were compelled to abandon their cherished scheme of a great open-cut channel for their fleets to the South Sea, and to accept the only alternative of a long, circuitous, and dangerous voyage by the Straits of Magellan.

For all purposes of rapid communication, nevertheless, the monarchs of Spain depended upon those roads across the continent which their inability to convert into canals had compelled them to accept. The galleons from the Philippines, and those laden with the treasures of Peru, and carrying also the passengers and correspondence of that period, concentrated either at Panama or Acapulco, whence their precious freights were transferred over land to the Atlantic coast, and thence dispatched to Spain.

The selection of these points of communication between the seas was not, however, made with reference to those conditions which would govern a choice at the present time, and under our application of steam to sea and land transport. Depending necessarily upon mules as a means of conveyance, the Spaniards fixed upon those points where the continent was the narrowest, and with little reference to such considerations as good ports and a salubrious climate, which would now be regarded as of more consequence than distance.

But the adoption both of Acapulco and Panama was perhaps chiefly determined by accidental circumstances. The discovery of Peru, the achievements of Pizarro and his captains, and the spoils which they wrested from the Incas, immediately directed thither the current of adventure. That current swept naturally over the Isthmus of Panama, and contributed, equally with the considerations already mentioned, to fix the principal line of communication between the seas at that point, where also trading and other establishments and interests gradually grew up, hostile to any change, however powerful the considerations on which it might be demanded.

Yet the extreme insalubrity of the Isthmus of Panama, its inability to furnish supplies, and its deficiency in good ports, stimulated the Spanish crown, and particularly the famous "Council of the Indies," to encourage the opening of a better and more salubrious route of transit.

The search for a point which would admit of the construction of a canal, already alluded to as having been prosecuted with the greatest zeal and energy, had resulted in the discovery of a line in the then prov-

ince, now State of Honduras, which it was supposed offered certain facilities for that project. But when the plan of a canal was laid aside, and the purposes of the crown for the time being limited to the choice of a route over land which should meet the immediate requirements of the nation and its colonies in the Pacific, attention was again directed to the line across Honduras.

As early as 1540, but 38 years after Columbus had landed on the shores of Honduras at Truxillo, and but 14 years after Cortez himself, at the close of a long and weary journey from Mexico over land, had built the town of Natividad at Puerto Caballos, Alonzo Casceres, one of the lieutenants of Pedro de Alvarado, had founded the city of Comayagua, then called Valladolid, the present capital of Honduras, in obedience to instructions "to find out an eligible situation for a town midway between the oceans."

"It was the intention of the founders," adds the historian of Guatemala, Juarros, "by means of this place to obtain an easy communication between the Atlantic and Pacific; its situation, being about half way between Puerto Caballos and the Bay of Fonseca, would render it a convenient dépôt; the climate being healthy, and the soil fertile, much of the sickness and waste of human life would be prevented, and many of the fatigues and privations avoided that were usually experienced in the journey from Nombre de Dios to Panama."

Although the establishment of the city of Comayagua does not seem to have led to any immediate change in the course of trade across the Isthmus of Panama, still the object had in view was neither neglected nor abandoned. Among the many papers relating to this

subject in the general archives of the Indies at Seville is a memorial addressed to the King of Spain in 1556 by Juan Garcia de Hermosilla, entitled,

“Memorial of Juan Garcia de Hermosilla, native of Chillon del Rey, given in Valladolid, 1556, on changing the navigation and route of the fleets to the ports of Honduras in place of Nombre de Dios, setting forth the dangers and inconveniences which result to the kings of Spain and the provinces of Peru from the ports of Nombre de Dios and Panama, and the advantages and conveniences which would be assured by the ports of Caballos and Truxillo, in the Province of Honduras, and that of Fonseca on the South Sea.”

From this MS. it appears that in the year 1554 the King of Spain commissioned Juan Garcia de Hermosilla to make a special examination of the route through Honduras, and of the ports at its extremities. His observations were embodied in two memorials, presented by him to the king in Valladolid, dated 1556, and in a report of the examination of a number of witnesses to the facts therein presented, made at Seville in 1558. Among those who testified on that occasion, and supported the recommendation of Hermosilla in favor of the change, we find the names of the celebrated chronicler of the Indies, Gonzalez Hernandez de Oviedo, of Juan de Barbosa (Governor of Tierra-firme), and the cosmographer Luis Gutierrez.

This investigation was made in accordance with a royal cedula, dated the 17th of October, 1556, and directed

“To the officers of H. M., with two memorials by Juan Garcia de Hermosilla relative to the proposed change for the transit between the seas from Panama and Vera Cruz to the Province of Honduras, in order

that they shall call together all persons acquainted with the matter, and obtain from them all information possible, and also adopt such measures as may seem proper in order to verify the feasibility of the proposed new transit."

It would appear, however, that in consequence of some temporary disorganization of the Council of the Indies, to which these documents were finally referred, they did not particularly arrest the attention of that body. The subject was, however, again brought up by Felipe de Aniñon, an old resident of the Indies, in a letter addressed to the King of Spain in 1565, entitled,

"Memorial of Felipe de Aniñon on the utility and advantages which would result from changing the route of transit between the seas from Nombre de Dios and Panama to Puerto de Caballos and Fonseca."

The memorial of Aniñon sets forth that the subject of which he proposes to speak is one that "concerns the glory of God, the service of his majesty, and the common good," and he claims to be heard, and have his representations credited, as "being an old settler in the country, well informed on its condition and resources, and from having traveled all over it." He affirms that the change proposed by Hermosilla would "result in the saving of the lives of many Spaniards, in consequence of a better climate, in the better protection, at less cost, of the establishments on both seas against the attacks of freebooters and pirates, and in the speedy establishment of ten or twelve cities in a country rich in the ores of gold and silver, and abounding in corn, cattle, and other supplies."

Shortly after the presentation of the memorial of Aniñon, namely, in 1578, another was laid before the King of Spain by the Licenciado Diego Garcia de

Palacios, Councilor of the Court, and Auditor of the Kingdom of Guatemala, entitled,

“On the Conquest and Pacification of the Philippine Islands, and the advantages which would result if the communication with them were conducted across Honduras, and from the Bay of Fonseca, on the account of the greater convenience thereby afforded, as well for the outfit of his majesty’s fleets, as for the easier provisioning and greater comfort of those embarked therein.”

After enumerating the difficulties and dangers of the transit through Mexico and across Panama, Palacios proceeds to say: “To avoid these, your majesty’s troops and munitions for the Philippines might pass across this province, disembarking at Puerto de Caballos, which is on the North Sea, and re-embarking at the port of Fonseca, which is on the South Sea. And, although the passage at Panama is shorter, yet the difficulties already recited, and others of a substantial nature, lie against it; while here there is greater salubrity, less opportunities for the desertion of soldiers, a larger supply of provisions, and greater facilities for building ships, at less cost, besides other things necessary and indispensable for the voyage and its comfort.”

These representations, and the obvious necessities of a change, although contested by the interests already concentrated at Panama and Acapulco, nevertheless induced the Council of the Indies to order a new and more complete examination of the proposed route of transit through Honduras. Accordingly, in the year 1586, the celebrated Italian engineer, Bautista Antonelli, the builder of the Moro at Havana, and of the first fortress of San Juan de Ulua at Vera Cruz, was sent to America to make a survey of the route in question. This he effected in conjunction with one Juan

Texada, and their joint report was made from Havana in 1591, and still exists among the archives of the Indies at Seville. It is entitled, "*Memorial of the engineer, Bautista Antonelli, and Juan de Texada, addressed to his majesty the king from Havana, February 10, 1591, on the change to Puerto de Caballos of the navigation now made to Nombre de Dios.*"

The opposition to the contemplated change was not confined exclusively to Panama and Acapulco. The Audiencia of the Confines, transferred from Gracias á Dios in Honduras to Guatemala, and sharing in that selfish spirit of localism which has been the bane of the Spanish American provinces, did not look with complacency on a scheme which, if carried out, would naturally render Honduras the most important province of the captain generalcy, and perhaps lead to another change in the seat of the vice-regal court. Sharing in this spirit, the doctor Criado de Castilla, who had been auditor at Panama, and that time was governor of the provinces of Guatemala, wrote a memorial in 1605, in general opposition to those of Hermosilla, Aníñon, etc., but designed more particularly to exaggerate the port of Santo Tomas, nearer Guatemala, and discredit Puerto de Caballos. It is entitled, "*Discovery and favorable circumstances of the port called Santo Tomas de Castilla.*"

Castilla makes the objection that the ports of Caballos and Fonseca, so far from being recommendable on the ground of their ease of entry and exit, as set forth by Hermosilla, are for that reason to be avoided, since, he argues, "the rascally French and English pirates can enter and escape with ease, whereas, if the channels were narrow, intricate, and difficult, they could not enter without the aid of expert pilots, which they

would be unable to obtain!" an objection which, at this day, would hardly tell in favor of Dr. Castilla's case, or against the ports which he condemns.

In furtherance of his views, Castilla procured a letter from one Alonzo Duarte, a resident of Guatemala, and who professed to have gone through Honduras with a certain Francisco Hurtado de Valverde, nowhere else mentioned, but who seemed to have been sent to survey Puerto de Caballos, the Bay of Fonseca, and the intermediate country. Duarte's letter is entitled,

"Relation made May 22, 1605, to Dr. Alonzo Criado de Castilla, by Alonzo Duarte, resident of Guatemala, of what he saw and understood when Francisco Hurtado de Valverde went to sound the ports of Caballos and Fonseca, and to examine the road between the two over land."

In the same interest, one Captain Pedro de Izaguirre wrote a memoir designed to favor Santo Tomas (named after its advocate "*de Castilla*") as a port of entry for Honduras in place of Puerto Caballos, entitled,

"Relation of the position and qualities of Puerto de Caballos and the new port of Santo Tomas de Castilla, in the province of Honduras, by Pedro de Izaguirre, captain of her majesty's ships, sailors, and marines, who were in that province during the year past, 1604-5."

Other papers and memoirs, both favorable and unfavorable to the proposed change, were laid before the Council of the Indies and addressed to the crown, but before any decision on the subject was reached, Spain became involved in a series of wars, provoked by a rivalry of her growing wealth and power, which, in conjunction with the large interests concentrated at Pa-

nama, and naturally hostile to a change, were among the causes that suspended the opening of the transit across Honduras ; and in the subsequent troubles of the mother country, extending equally to the colonies, harassed by invasions, and their coasts infested by pirates of every nation, it would seem that the project was not only neglected, but absolutely forgotten. It is said that some time during the last century the line was again examined by engineers with reference to a canal, but of this fact I have been unable to obtain any satisfactory evidence.

CHAPTER XXX.

INTER-OCEANIC RAILWAY THROUGH HONDURAS—GENERAL
CONSIDERATIONS—LINE OF ROAD—PUERTO CORTEZ—
PUERTO CORTEZ TO SANTIAGO—PLAIN OF COMAYAGUA—
SUMMIT—BAY OF FONSECA, ETC.

OF the various points which have at different periods been suggested as affording facilities for inter-oceanic communication, three have been claimed to be fit places for opening canals, viz., Nicaragua, Darien, and Atrato. It was once supposed canals might be opened at Tehuantepec and Panama, but, since the proper surveys have been made at these points, this idea has been relinquished. The survey made at Nicaragua in 1850 (see *ante*, p. 417) has also shown that the construction of a canal through that state, although possible, will be attended with unexpectedly great difficulties, and a cost so heavy as to preclude any adequate return on the capital invested. A reconnaissance at Darien in 1853 proved the utter impracticability of that line for a canal. The Atrato line remains to be brought to the test of a survey—a test which has proved fatal to many plausible speculations in other instances. But, even if it should be shown that a canal be feasible at that place, its extreme southern position will always be an insuperable obstacle to its success, inasmuch as the principal points in the Pacific with which it is most important to have a means of speedy communication lie in high northern latitudes.

In fact, so far as the United States are concerned,



BAY OF FONSECA, PACIFIC PORT OF HONDURAS RAILWAY.

[To face p. 676.]

the great desideratum is a route as far to the northward as possible; and whether it be by water or railway, adequate ports on both seas are indispensable requisites. Without these, there can be neither facility nor security of communication; and every mile to the southward of the latitude of New Orleans which any route may lie, adds two miles to the aggregate distance between the Atlantic States and California, Oregon, the Sandwich Islands, and the great centres of Oriental trade which are now opening to our enterprise.

Any route, therefore, which shall best conform to these conditions, viz., a high latitude and good ports, has not only the first claim on the public attention and support, but will, in the end, supersede all others.

And here it may be observed, that when the project of opening an inter-oceanic communication across the Central American Isthmus first began to attract the attention of the world, steam-boats and railways were unknown. Accordingly, no lines were indicated except such as were supposed to have an adaptability for canals; and hence also resulted that predilection, almost amounting to prejudice, with which certain particular lines have continued to be regarded, even since modern discovery has altered the entire nature of the question. The Spaniard designated the Isthmuses of Panama and Tehuantepec as probably the only places where a canal could be dug. He was governed in this selection wholly by the consideration which I have named, and to which all other considerations were necessarily subordinate. Had he been acquainted with steam in its application to land-carriage and to navigation, he would never have given those isthmuses a second thought, but would have selected other lines which should combine the great and indispensable conditions to a good and

permanent route of transit, viz., good ports, salubrious climate, and advantageous commercial position.

But now, however desirable a water communication between the seas may be esteemed, it is well known that many of the requirements of trade, and all those of travel and the transmission of intelligence, can be met by railways better than by canals. Their greater adaptation to natural conditions, facility of overcoming physical obstacles, and greater cheapness of construction, also commend them more directly to practical attention.

As we have seen, the isthmus of Honduras was designated as early as 1540 as affording superior advantages to any other route of communication then known for land transport between the oceans. It was subsequently carefully examined with reference to a general concentration there of the fleets of Spain, preliminary to the abandonment of the other routes then in use. These examinations, so far as their results are known to us, were in every case favorable to the change. Why that change did not take place is sufficiently explained by the political condition of the world at the close of the sixteenth century, when the nations of Europe, as if by common impulse, jealous of the power and glory of Spain, united in a system of public and private war on her commerce and against her American possessions. To erect new establishments, build new fortifications, and carry out all the measures necessary to a successful transfer of the route from Panama, under such adverse circumstances, was obviously impossible. To retain what she already possessed, and to give adequate protection to the route then in use, was all that her power, diffused over so vast an area, could accomplish. With her declining fortunes, the neces-

sity of a new and better way of communication gradually became less, until, with the revolt of her colonies, all interest in the matter ceased. The difficult and deadly route by way of Panama, traversed only at intervals by caravans of mules, sufficed for two centuries for the small necessities of communication with the Pacific; and it was not until the purchase of California by the United States, the discovery there of gold attracting an emigration unprecedented in the history of the world, that the question of inter-oceanic communications assumed, for a second time, a real interest and a practical form. Tens of thousands of eager and ambitious men directed their course to Panama, heedless of its insalubrity, and risking decimation in their transit. They recklessly sought the only way then open to them whereby they could reach the shores where Fortune was believed to shower her favors with a lavish and indiscriminate hand. To afford them a safer and speedier means of passing the barrier of the continent became, at the same time, a necessity and a benefaction; and it is only surprising that enterprise usually intelligent, and capital always cautious, before attempting to accomplish this grand object, did not first seek out the shortest, safest, and speediest line whereby the seas might be united, instead of blindly accepting a route notoriously cursed by nature, and condemned by every consideration, geographical, commercial, and political—deadly in climate, barren of resources, without ports, and in every way incapable of meeting the great and permanent requirements of travel and of trade. And however much we may admire the energy, perseverance, and zeal which has finally carried through the railway at Panama, in face of appalling physical difficulties, and at fearful sacrifice of

human life, it is nevertheless obvious to all, and conceded by all, except those whose interests lead them to maintain a different view, that this railway fails to meet adequately, or in any considerable degree, the leading requirements of a safe, easy, and permanent route of inter-oceanic communication. No other line of transit yet proposed, at Chiriqui, Nicaragua, Honduras, or Tehuantepec, but possesses greater advantages, and in every respect improved conditions over Panama. Of these it is believed the route *via* Honduras offers greatest facilities, to be determined, perhaps, only by the test of experiment, to which, after all, every line must be submitted.

As explained in the "Geographical Introduction" to this volume, I conducted a close examination of the line in the year 1853-54. Since that period, terminating on the 1st of May of the present year (1858), a thorough survey of the line for a railway has been made by Colonel J. C. Troutwine, and verified by Lieutenant Colonel Edward Stanton, R. E. (sent out for the purpose by the British government), the hydrography being under the charge of Lieutenant W. N. Jeffers, U. S. N., with the results herewith presented.

The proposed line commences at Puerto Cortez (late Caballos), on the Bay of Honduras, in lat. $15^{\circ} 49' N.$, and long. $87^{\circ} 57' W.$, and runs nearly due S., across the continent, to the Bay of Fonseca, on the Pacific, in lat. $13^{\circ} 21' N.$, and long. $87^{\circ} 35' W.$ Its total length from anchorage to anchorage, or from five fathoms of water in Puerto Cortez to five fathoms of water in the Bay of Fonseca, is one hundred and forty-eight geographical miles. Starting at Puerto Cortez, the line pursues a course a little east of south, across the plain of Sula, until it strikes the Rio Ulua near the town of

Santiago; thence it follows the valley of that river, now called the Humuya, to its very source, in the great plain of Comayagua, a distance of not far from one hundred miles from Puerto Cortez. At the southern extremity of this plain there is an elevation of four hundred feet, which constitutes the "summit" between the Atlantic and Pacific. Here the sources of the Humuya interlock with those of the Rio Goascoran, which flows through its proper valley into the Gulf of Fonseca.

Two important facts are to be observed in tracing this line.

I. That the valleys of the Humuya and Goascoran, in conjunction with the central plain of Comayagua, constitute a great transverse valley extending from sea to sea, completely cutting through the chain of the Cordilleras.

II. That this great transverse valley or natural cut extends due north and south, and permits the location of the proposed road so that, in its whole course, it will deviate very little from a right line.

These natural conditions, not less than capacious, safe, and altogether unexceptionable harbors at both extremities, and a country eminently salubrious, distinguish this line as combining the obvious and primary requisites for an adequate and permanent inter-oceanic communication to a degree which has no parallel in any project which has yet been presented to public consideration.

I. PUERTO CORTEZ.

Puerto Cortez, or Caballos, as I have said, opens on the Bay of Honduras, in lat. $15^{\circ} 49'$ N., and long. $87^{\circ} 57'$ W. It was selected by Cortez, in his expedi-

tion into Honduras, who founded there a town, which he called Natividad. The selection was made, to quote the language of his fifth letter to the King of Spain, "*porque es el puerto mejor que hay en toda la costa descubierta de esta tierra firme, digo, desde Las Perlas hasta la Florida*"—that is to say, "because it is the best port hitherto discovered on all the coast of the main land from Las Perlas to Florida." He adds that he has made haste to effect a settlement there, not less because of the beauty of the port itself, than on account of the excellence of the neighboring country, which he affirms was well populated and fruitful. In fact, Puerto Cortez remained for more than two centuries the principal port on the coast; but, during the domination of the pirates, and the wars with the English and Dutch, it was found to be too large to be easily defended, and was consequently removed, a portion of the inhabitants establishing themselves at Omoa, a few miles to the westward, and the remainder settling at Santo Tomas. Lieutenant Jeffers describes it as follows:

"Puerto Cortez is a good harbor, of great capacity, sufficient depth of water, and easy of entrance and exit. Situated at the base of the hills, there are neither marshes nor swamps to affect the healthfulness of the locality, which is sufficiently extensive for the formation of a large city. The lagoon, which is of salt water, and open to the sea, abounds in fish."

The winds which prevail on the north coast of Honduras are from the N.E., N., and N. by W., from all of which the port is perfectly protected. W. and S.W. winds are scarcely known, and are furthermore cut off from the port by the high hills and mountains skirting the coast in that direction.

The port is of large capacity, being not less than nine miles in circumference. Its depth is ample, rang-

ing, for more than two thirds of its area, from four to twelve fathoms, with secure holding-ground. Toward its northern shore, the depth of water is greatest; and by the construction of docks of ordinary length, the largest ocean steamers may enter, and receive and land passengers and cargo more easily than in the docks of New York or Liverpool, inasmuch as, in this portion of the Bay of Honduras, the rise and fall of the tide are almost imperceptible.

Connected with the port or bay is a large salt-water lagoon, upward of two miles in length, by about a mile and a quarter broad, an average depth of twenty-four feet. Should it ever be thought proper, the connecting channel may be dredged so as to permit vessels to enter the lagoon, where they would be completely landlocked, and where no wind could affect them in any perceptible degree. In place of deepening the connecting channel, an open cut, a few hundred yards in length, would effect the same result. This cut could be made through firm ground, and, once constructed, would remain permanently open, as none of the causes which operate to fill up excavations exist here.

The ground around the port is firm, and part of it cleared and under cultivation. In abundance of good water, and in fertility of soil, the neighborhood of Puerto Cortez offers every condition necessary for the building up and support of a large and flourishing town.

II. PUERTO CORTEZ TO SANTIAGO.

From Puerto Cortez, in order to reach the great and beautiful plain of Sula or Santiago, through which flow the large rivers Chamelicon and Ulua, it is necessary to make a circuit of several miles to turn the eastern end

or base of the high mountain chain of Merendon or Omoa, which is a branch of the Cordilleras, and which here finds an abrupt termination.

The plain of Sula forms a great triangle, its base resting on the sea, and extending for upward of fifty miles along the coast, from the outposts of the mountains of Omoa to those of Congrehoy, and its apex extending due south on the line of the proposed road in the direction of Comayagua. A portion of this plain, to the right or eastward of the Rio Ulua, is flat, and, during high water, subject to overflow. Such, however, is not the case with the western portion of the plain, over which the road will be located. Here the ground is firm, and the streams have all sand or gravel beds. No bottomless marshes, such as those which have obstructed the Panama road, are found here, nor, indeed, upon any part of the entire line.

From Puerto Cortez to Santiago there formerly existed a graded road, which may still be followed, although much grown up since the abandonment of the port. The ascent to Santiago is so gentle as almost to be imperceptible, and the cutting and filling will be so slight as scarcely to deserve mention.

Santiago may be regarded as the head of steam-boat navigation on the Ulua, although vessels of light draught, at favorable stages of the water, might ascend much farther. The engineers, who examined the river minutely, report that "steamers drawing seven feet may enter the Ulua at all times, and from June to January ascend as far as the junction of the Humuya. Light-draught steamers can always ascend to the mouth of the Humuya, and by the Rio Blanco to a point near Yojoa."

III. FROM SANTIAGO, BY VALLEY OF RIO HUMUYA, TO PLAIN OF ESPINO.

From Santiago the line of the road is discretionary. It may be located on either bank of the Humuya; the right bank, however, seems to afford the greater facilities. In following the left bank, it will be necessary to bridge the Santiago or Venta, a large and broad stream, requiring a bridge six hundred feet in length, and afterward to bridge the Blanco, which is narrow, not exceeding sixty feet in width. If, on the other hand, the Ulua is crossed below the junction of the streams, but one bridge will be necessary. Crossing, however, a larger body of water, it would require to be of more considerable dimensions than that over the Venta.

Taking either bank, the road would pursue essentially the same direction. The plain continues for about ten miles beyond Santiago, where it is contracted by the hills and mountains which border the comparatively narrow valley of the Humuya. From this point the ascent becomes more rapid. The course of the River Humuya, up to the plain of Espino, is direct, and the valley is "formed between hills of from fifty to five hundred feet of altitude, which, in general, come down to the banks of the river, but occasionally recede, and leave strips of level above the reach of inundations. The slopes of these hills are seldom abrupt, and no heavy work will be required at any point. The alternation of cut and fill, for the entire distance, is very favorable. The country around is generally broken, but intersected with numerous fertile valleys. This portion is more valuable for grazing than for agricultural purposes. The hills are covered with the

pine and oak, and on the borders of the streams exist vast quantities of mahogany, cedar, guanacaste (*lignum vitæ*), India-rubber, and other valuable trees."

About midway between Santiago and the plain of Espino, the River Sulaco, descending from the right, unites with the Humuya. This is a considerable stream, draining a broad and fertile valley, and extending in the direction of the rich department of Olancho. The construction of the proposed railroad would lead not only to the development of the valley of the Sulaco, by means of dependent wagon-roads, but would also bring the rich district of Olancho in close communication with the coast at Puerto Cortez.

IV. PLAIN OF ESPINO TO PLAIN OF COMAYAGUA.

The plain of Espino may be said to commence at the town of Ojos de Agua. From this town to the point where a transverse range of hills separates the plain of Espino from that of Comayagua, there exist no difficulties whatever to the building of the road. A few bridges over small streams, none requiring to be more than fifty feet water-way, are about the only constructions which will be required. The plain of Espino slopes gently toward the north, and lends its aid in overcoming the summit, without involving any effort of engineering skill.

It may be observed that the plain of Espino, sometimes called Maniani, is about twelve miles long by eight broad, and surpassingly beautiful. It is stated that, under the Spanish dominion, traffic was carried on between Maniani and Puerto Cortez in boats. In later times, loaded canoes have descended; and Lieutenant Jeffers went down in one from Ojos de Agua. The current of the stream, however, is rapid, and much

obstructed by boulders and rocks, making the navigation both difficult and dangerous.

Between the plains of Espino and Comayagua the River Humuya is much compressed by high hills, but no engineering difficulties of importance are interposed.

V. PLAIN OF COMAYAGUA.

The great plain of Comayagua constitutes precisely that feature in the general topography of the country which gives not only practicability, but eminent feasibility to the proposed railway. It is situated in the very centre of the state, midway between the seas, and is about forty miles in its greatest length, by from five to fifteen broad. Its greatest or longest axis is north and south, and nearly coincides with the line of the proposed road. These dimensions are exclusive of the lateral or dependent valleys of the streams, which concentrate themselves in this basin, and form the Rio Humuya. Like the plain of Espino, it slopes gradually to the north, and thus renders the grade of the proposed road to the summit comparatively gentle and easy. This plain is the only one in all Central America the longest axis of which coincides with the meridian; a feature which was early remarked by the Spaniards, and which led, as we have seen, to the foundation of the city of Comayagua.

The line of the road, as located by Colonel Trautwine, runs close to the city of Comayagua, crossing the Humuya to the eastward of the town of Lamani, and reaching the summit, on a grade of eighty-five feet for five miles, at the Pass of Rancho Chiquito. There is another pass, seventy feet lower, some miles to the westward, called Pass of Guajoca; but Colonel Trautwine considers that it is less favorable for the proposed work than that *via* Rancho Chiquito.

VI. THE SUMMIT.

Adopting the pass of Rancho Chiquito, the summit, or highest point between the two oceans, on the line surveyed by Colonel Trautwine, is 2850 feet above the sea. This pass is not a rocky summit, abruptly dividing the waters flowing into the great oceans, but a beautiful valley, a savanna, or natural meadow, bounded on the east by a parallel range of high mountains, and on the west by a corresponding range of hills. In this meadow, dotted over with cattle, the traveler finds two bright streams, scarcely a hundred yards apart, flowing in opposite directions. One is a source of



SUMMIT—PASS OF RANCHO CHIQUITO.

the Humuya flowing into the Atlantic, the other of the Goascoran falling into the Pacific.

The pass of Guajoca is lower by 70 feet than that of Rancho Chiquito. Like that of Rancho Chiquito, the pass of Guajoca is a broad savanna, in which the sources of the Goascoran and Humuya almost mingle. Upon the north side rises abruptly a high continuous ridge, 1200 or 1500 feet in height, which extends exactly parallel to the line of the road.

VII. VALLEY OF THE GOASCORAN.

After passing the summit, the line of the road will follow the valley of the Rio Goascoran to the plains surrounding the Bay of Fonseca. The grade will be very nearly uniform, although averaging higher than on the northern declivity. "The elevation to be overcome, to pass the summit at Rancho Chiquito, is 2850 feet; but when it is considered that there are no descents, *and that it is the total of ascents, and not the elevation of the summit*, that constitutes the expense of working, it will be seen that this is by no means unfavorable.

"South of Goascoran the formations are of porphyry, limestone, white sandstone, disintegrated quartz, gravel, and sand, mixed with lavas and volcanic stones. At Goascoran there are extensive beds of blue limestone, and in all the streams an immense quantity of large boulders of granite, gneiss, conglomerate, and sandstone. From this point the rock is a white sandstone, sufficiently soft to be quarried with the pick, but hardening and toughening by exposure. Its durability is sufficiently proved by the existence of engraved figures upon the rocks near Aramacina, which are in a good state of preservation, although of a date anterior to the Conquest. Excavations can be made at an expense little or no greater than in earth, with the advantage of durability, and no liability to wash. Upon the whole line there is abundance of gravel, sand, lime, and brick-clay.

"At Aramacina the yellow pine appears on the hills, and at San Juan and Aguanqueterique it is to be found of good size and in inexhaustible quantities in the immediate vicinity of the road. The pine at-

tains a size of thirty inches, and from fifty to seventy-five feet of altitude, differing in no respect from the best North Carolina. The oak is also to be found in considerable quantities, as well as many other useful and valuable woods in any desirable abundance.

“The width of the valley is so small, compared with its length, that there are no streams to be crossed between the terminus and the summit having a water-way to exceed thirty feet: the expense in this important item will consequently be exceedingly small. For the construction of bridges there is, nevertheless, abundance of timber on the ground.

“The smaller streams running into the Goascoran afford a supply of water-power applicable to the running of saw-mills or other machinery.”

VIII. BAY OF FONSECA.

The magnificent Bay of Fonseca (see *ante*, p. 98), the western terminus of the proposed road, is, beyond dispute, the finest port, or, rather, “constellation of ports,” on the entire Pacific coast of America. It is sixty miles in length by about thirty in average width, perfectly protected, and contains two or three large islands, offering inner ports with ample water, and admirable sites for towns and commercial and manufacturing establishments of all kinds. The three states of San Salvador, Honduras, and Nicaragua touch upon it. Honduras, however, has far the largest front on the bay. The port of La Union, in the subordinate bay of the same name, is the principal port of San Salvador. The principal port of Honduras is Amapala, on the island of Tigre. It is a free port, and is rapidly advancing in importance, its population and trade having doubled within the past two years. An Amer-

ican company has erected on the island a large steam saw, planing, and shingle mill, which is now in active and effective operation. This company is ready to contract for supplying cross-ties and lumber of all kinds for the construction of the Pacific section of the road, and for its various dependent edifices, such as stations, depôts, etc.

The precise point of termination on the bay will depend upon such considerations as may be disclosed from a careful examination by the engineers, and by other circumstances. The road may be carried upon the large island of Sacate Grande to a point fronting on a capacious and excellent anchorage. It might even, with some difficulty, be carried across the northern end of that island, and be made to terminate on the island of Tigre by means of a pile bridge a mile and a quarter long, over a strait having but six feet depth of water at low tide.

It can also be brought, without serious difficulty, to a point on the main land fronting on the Bay of Chismuyo; but here it would be necessary to carry out a wharf of considerable length, while at Sacate Grande and Tigre a wharf or dock of ordinary length would enable the largest steamers to "tie up" beside the depôts of the company.

Or, in case it should be found to be desirable, it may be made to terminate upon the island of Garova, between which and the main land the bottom is dry at low tide. Both Punta Remolina, on the island of Sacate Grande, and the island of Garova, are accessible from the sea by a broad ship-channel, having not less than twenty-four feet of depth at low, and thirty-four feet at high tide.

The road could readily be made to terminate at La

Union ; but as this would involve going into another state, without attaining any object beyond what would be equally secured at the other points named, the fact is not of importance beyond showing the great facilities which the bay affords for the work in question.

A general chart of the bay was made by Sir Edward Belcher, under instructions from the British government, in 1838 ; and a more minute survey of the parts available for the proposed road was made by Lieutenant W. N. Jeffers, U. S. N., in 1857-58. The results attained by these officers coincide with those reached by Captain M. T. de Lepelin, of the French Marine, who reported to the imperial government in 1854 that

“The vast and magnificent bay, studded with islands, which stretches into the land between the points of Candadilla and Coseguina, and generally known as the Bay of Fonseca, or Amapala, has no rival on the entire coast of the Pacific, whether as regards its extent, its security, its beauty, or its naval and commercial position.”

It seems to have been marked out by the Creator as the ultimate centre of the commerce of the Pacific. Salubrious, surrounded by a country of illimitable agricultural resources, and with rich and exhaustless coal, gold, and silver mines inland ; abounding in fine fish, including excellent oysters, etc., etc.—in short, possessing all the necessities for sustaining a large and prosperous population, the Bay of Fonseca is unrivaled in its adaptation for a terminus of a great work of universal utility like the one proposed.

IX. GRADES.

In the construction, but to a still greater degree in the working of railways, the matter of grades is a most important consideration. From Puerto Cortez to the

plain of Comayagua there are no grades exceeding 30 feet to the mile. Ascending from the plain to the summit there are a few miles of 85 feet grade; and on the Pacific side there are a number of miles of 95 feet grade, with some heavy cutting, generally, however, in a rock easily worked, and yet sufficiently hard to admit of slope-cuttings of 80 degrees. From Aguanqueterique to the Pacific the grades are light, and the work of construction easy. The results are highly favorable, as will be seen by the following comparison:

TABLE OF MAXIMUM GRADES.

Baltimore and Ohio Road, per mile . . .	116 feet.
Baltimore and Susquehanna Road, per mile	90 “
Boston and Albany Road, per mile . . .	89 “
New York and Erie Road, per mile . . .	60 “
Panama Road (eastern slope), per mile . .	53 “
Panama Road (Pacific slope), per mile . .	60 “
Tehuantepec Road (proposed road), per mile	64 “
Honduras Road (proposed road), per mile .	55 “

There are 21 consecutive miles of 116 feet grade on the Baltimore and Ohio Road, which is one of the most successful in the United States. On the 116-feet grade here referred to, it is stated by the engineer of the road that “an engine weighing 24 tons, with a traction power of 15,160 pounds, has ascended with a train of loaded cars, weighing, in the aggregate, exclusive of tender, 208 tons, at a speed of from 6 to 8 miles the hour. The same engine ascended the same grade with a passenger train of 118 tons at the speed of 17 miles the hour.”

While the Kingwood tunnel, on the same road, was in course of construction, “a temporary track was laid over the top of the hill at a grade of upward of 500 feet per mile, over which the materials were taken by

a locomotive engine, which drove a single car at a time, weighing, with its load, 13 tons, at a speed of 10 miles per hour and upward."

The extreme grades upon the Elkhart Road, in Virginia, are 135 feet per mile. This road has been worked for ten years with entire success, both summer and winter. The engines are of 22 tons, and take up loads of 66 tons, exclusive of tender.

In the coal regions of the Schuylkill and Lehigh, in Pennsylvania, there are roads safely worked by locomotive power with grades as high as 140 feet.

The Superintendent of the Baltimore and Susquehanna Road states: "We have 1 grade of 84 feet per mile, 3 miles long, over which a locomotive of 26 tons hauls, at 12 miles per hour, 40 four-wheeled cars, each containing 3 tons of produce, the cars themselves weighing 114 tons; the whole load, therefore, amounting to 234 tons."

The Valparaiso and Santiago Railway, in Chili, has a total length of 110 miles; height of summit, 2640 feet; maximum grades, 119 feet to the mile.

But America is not the only portion of the world where steep grades of this kind are successfully overcome. Dr. Lardner, in his "Railway Economy in Europe and America," states that, in the railway from Brunswick to Hamburg, in Germany, the prevailing gradient is 32 feet to the mile; with one section, from Hamburg to Weinenburg, 5 miles, of from 98 to 106 feet per mile. These grades are overcome without assistant power, and loads of from 60 to 70 tons are drawn over them by engines of 18 tons.*

* Mr. Swan, President of the Baltimore and Ohio Railway, gives the following relative to English railways:

"On the extension of the Great Western, in England, a grade of 141 feet

The sum of ascents and descents on the proposed Honduras road, with a length of 200 miles, does not exceed 6000 feet, at an average of 30 feet per mile; while the sum of ascents and descents on the first or eastern division of the New York and Erie railway, a distance of 71 miles, is 3872 feet, an average of 54 to the mile, or more than double the average grade of the proposed road. Heavy grades are, of course, objectionable, but the improvements which have been made in locomotive engines enable the engineer to overcome altitudes which have hitherto been deemed impossible to pass.

Hitherto such grades have been avoided, at whatever sacrifice, in favor of moderate grades, even when the sum of ascents to be overcome has been the same. In other words, it has been thought that in a road 100 miles long, leading to a summit of 1000 feet of altitude, an average and uniform grade of 10 feet per mile for the entire distance is preferable to 80 miles of level, and 20 of a 50 feet per mile grade. But, practically, the latter arrangement is said to have been found the best; that is to say, the concentration of grades at one point, compensated by an auxiliary locomotive power, is generally believed to be most advantageous, both as regards cost and time.

How far this principle can be applied usefully on the line of the proposed road, must be left to the discretion of the engineers to whom its construction may be confided. Fortunately, the nature of the country admits of such discretion. There may be a consider-

occurs, and has been worked without assistant power, and with entire success, for two years. On a branch of the Great Western, the Wilts, Somerset, and Weymouth, not yet completed, there is a grade of 1 in 47. On the Birmingham and Gloucester, in operation eight years, 20 miles from Birmingham, there is a grade of 1 in 37½. On the Caledonian Road, from Carlisle to Glasgow, there is a grade, of 8 miles, of 1 in 75. All these have received the sanction of the government inspector of railways."

able concentration of grades within 10 miles on either side of the Summit, by approaching it directly ; or the road may be located at the bases of the parallel ranges of hills, on lighter and nearly uniform grades.

The profile of the proposed road shows that the disposition of grades is favorable to the general course of travel and traffic ; the heaviest lying on the side of the Pacific, and the lightest on the side of the Atlantic, from which direction, it may be calculated, three fourths of the freight, and two thirds of the passengers going between the seas, will proceed. This is a consideration of no little importance in calculating the economic working of the proposed road.

X. LABOR, MATERIALS, ETC.

Nearly all of the materials necessary for the construction of the road exist on the line. There are inexhaustible quantities of limestone, and of the finest white and blue marble and sandstone, as also of the best pine, oak, and other varieties of useful timber, including mahogany, rosewood, *lignum vitæ*, etc. The country generally is cool and salubrious, and proper for the employment of extra-tropical labor.

On the northern coast, where the climate would be least favorable to exotic labor, there is fortunately a large body of effective native laborers, fully acclimated, and well skilled in precisely the kind of work required for the construction of the road : I mean the Carib (or mixed Carib and negro) mahogany-cutters. Of these there exist from 6000 to 7000 on the coast, all completely organized, and accustomed to work in large bodies. They are unsurpassed axe-men, and expert in the clearing and grading of roads and construction of bridges.

The truck roads in the mahogany cuttings on the Ulua are often several miles in length, 30 feet in width, carefully leveled, grubbed, and bridged for the passage of loaded trucks drawn by six yoke of oxen. These roads are constructed by *task-work*, at the average rate of about 50 yards per man per day, or say 50 dollars per mile. The pay of these men, in ordinary periods, is about 15 dollars per month and rations; but as one half of the amount is paid in goods, this rate really amounts to but about 12 dollars cash. The rations consist of a certain amount of flour, and a fixed number of pounds of pork per week. Plantains, which grow in the greatest plenty on the coast, are substituted, to a considerable extent, for flour. The huts which the men occupy are constructed on the spot, and are made of poles or canes, covered with palm leaves, and seldom require more than half a day in building. A hammock swung from one corner to the other, a couple of stones to support the cooking utensils, and the habitation of the workman is complete. He has few artificial wants, and no winter to provide against or to interrupt his labors. All he requires is a covering to protect him from the sun and the rain.

In the interior of the state, Europeans may labor as well as in the most favored parts of the world; and on the Pacific coast, adjoining the State of San Salvador (which is the most populous state of all Spanish America), there will be little, if any difficulty in obtaining all the labor requisite at about half a dollar per day, including provisions.

Upon the points here indicated we have the impartial evidence of Dr. Carl Scherzer, of the Imperial Academy of Sciences of Vienna, who visited Honduras in the year 1854. He says:

“The many material resources of Honduras will greatly contribute to facilitate the construction of the proposed railway; the adjacent forests will supply the necessary timber; and the rivers, navigable in the rainy season for considerable distances, will easily permit of the transportation of materials and of supplies, as well as of the products of the soil.

“But what gives most importance to the plateau of Honduras, apart from its fertility and its temperature of perpetual spring, *is the salubrity of its climate*, which allows colonists from northern regions to cultivate the soil and pursue their avocations without danger to their health. I have visited the greater part of North America, from Canada and Lake Superior to Louisiana and the Gulf of Mexico, but I have nowhere found a territory which offers the same advantages to agriculture with the plateaus of Central America. Commencing at an elevation of 3000 feet above the sea, European agriculturists will find throughout a climate perfectly salubrious. The meteorological observations which I made in different parts of the country, extending over a period of two years, and which I propose very soon to publish, show that, at the elevation of 3000 feet, the thermometer very rarely falls below 60°, and seldom rises above 82° of Fahr. The mean temperature of the summer, or hot season, is from 69° to 75° of Fahr. The soil of Honduras, with few exceptions, is of such fertility as to require no manuring in order to yield two or three crops a year. The products of the torrid zone—sugar-cane, coffee, cacao, cotton, rice, tobacco, maize, bananas, yams, yucas, potatoes, etc., may be cultivated side by side with the wheat, barley, oats, rye, and the other cereal grains and useful plants of Europe. A delicious climate permits the emigrant to labor and follow his avocations for the entire year. With less effort he obtains ten times the products which he could secure in Europe. In many parts of the state are found mines of silver, gold, lead, copper, and iron, yet undeveloped, and only awaiting the introduction of capital and of intelligent workmen.”

XI. RESOURCES ON THE LINE OF ROAD.

Apart from the rich agricultural resources of the country through which the proposed road will pass, embracing every variety of tropical staple—coffee, cochineal, cotton, cocoa, sugar, rice, tobacco, indigo, maize, etc.—there are other vast and undeveloped sources of wealth. The valley of the Ulua abounds in valuable and precious woods, and the hills and mountains of the interior contain numberless mines of the precious metals. There is hardly a stream on the Atlantic slope of the Cordilleras which does not carry gold, in greater or less quantities. Recent examinations have shown that the sands of particular streams approach the placers of California in the extent and value of their yield. The silver mines of the interior, however, are unsurpassed in the amount and richness of their ores; and there is reason to believe, with the intelligence, enterprise, industry, and capital which will inevitably flow into the country with the prosecution of the railway, that Honduras will become, in proportion to its territorial extent, the largest silver-producing country of the world. In fact, up to this time, the mining interest of the state has been greater than all others, and under the crown as much as \$3,000,000 were annually exported from the northern ports of the province. Other metals, such as iron, copper, and lead, are also abundant, and require nothing more than the opening of roads for the transportation of machinery, etc., to become important items in the productive wealth of the country.

Coal is also found at various places in the state, as also in the State of San Salvador, within sixty miles by water of the Bay of Fonseca. It can be supplied

to the steamers of the company with facility, and can be exported to any point on the Pacific where it may be desired. A bed of coal which I examined in the plain of Sensenti, department of Gracias, covers a large area, and is ten feet in thickness. In this department are valuable mines of opals; and cinnabar and asbestos are also reported to exist.

In the enumeration of the products of the state, hitherto neglected, I may mention sarsaparilla, gum copal, India-rubber, gum arabic, fustic, dragon's blood, vanilla, Brazil-wood, liquid amber, Peruvian bark, quinine, etc., etc. Cattle are numerous in the state, and constitute a considerable part of the wealth of the inhabitants. Hides, therefore, which now hardly pay to be carried to the coast on mules, will become an important article of export when new and cheap means of transportation are established.

Altogether, the establishment of regular communication with Honduras, and between its ports and the interior, will open to the world a rich and virgin field for industrious and enterprising men, create new markets for manufactures, afford additional supplies for use, and give a corresponding impulse to commerce and trade.

XII. SUMMARY OF THE CHARTER.

A charter for the construction of the proposed road was signed by Don Leon Alvarado and Don Justo T. Rodas, as commissioners of Honduras, and Mr. E. G. Squier, as commissioner of the "Honduras Inter-oceanic Railway Company," on the 23d of June, 1853, which was subsequently ratified by the Legislature of Honduras, and proclaimed by the President of that republic April 28th, 1854. It is far more liberal in its

provisions than any charter ever conceded for any similar purpose, and, moreover, places the relations between the company and the state on a basis so plain and simple, and, withal, so mutually advantageous, as almost to preclude the possibility of difficulty or misunderstanding arising between them. The following is a rapid summary of its provisions:

Section I. concedes to the company the exclusive right for an inter-oceanic communication, by water or railway, through the territories of Honduras, and gives to the company all the lands and natural materials necessary for the purpose. Eight years from the date of the ratification of the contract are conceded for the completion of the work, with privilege of extension in case of interruption from natural or unforeseen causes. The charter is for *seventy years* from the completion of the work proposed, at the end of which time the state may purchase the road at a fair valuation, or extend the charter, in its discretion.

Section II. provides that the company shall have free passage over all lands, public or private, and concedes to the company a space of 200 yards on each side of the line of the road; free use of all timber, stone, or other natural materials; free use of all the rivers and harbors of the state; and free introduction of all machines, instruments, provisions, and other materials for the construction and use of the road. Native laborers employed on the road are exempt from civil or military service. The company has the right to constitute itself a stock company, etc., and all its rights, interests, and property are permanently exempt from taxation and charge on the part of the state.

Section III. provides that the company shall pay to the state the sum of one dollar for each through passenger over ten years of age. The company will receive the labor of convicts from the state on equitable terms, and agrees to fix the rates for interior transit and trade on the lowest terms consistent with its interests.

Section IV. provides that the citizens of the United States, and of all nations at peace with Honduras, shall pass over the route free of all taxes and charges, and without the requisition

of passports. All goods and merchandise *in transitu* shall also pass free of charges on the part of the state, with the exception of a nominal sum for registry, to be paid by the company. Baggage of passengers to pass without examination or charge of any kind.

Section V. makes a gift to the company of 4000 caballerias of land, which, as the caballeria is fixed by law at 160 acres, equals 640,000 acres, or 1000 square miles. The company has also the exclusive right to purchase and locate, on the line of the road or elsewhere, an additional 5000 caballerias (800,000 acres), at $12\frac{1}{2}$ cents (*6d.* sterling) the acre, payable in the stock of the company at par. All persons settling on the lands of the company are entitled to all the rights and privileges of native-born citizens of the state, and are exempt for ten years from all kinds of taxes, and all civil or military service, except with their own consent.

Section VI. stipulates that the ports at the extremities of the road shall be *free ports*. A commission of five persons, two named by the company, and two by the state, who shall jointly elect a fifth, to constitute a "Tribunal of Reference," to frame all the necessary rules and regulations for carrying out the charter in its letter and spirit, and to decide finally and without appeal all disputes which may arise between the state and the company. The government of Honduras to open negotiations with the leading maritime nations for the guarantee of the perpetual neutrality of the proposed route, in accordance with the Convention of Washington, July 5th, 1850. The company to have the right to construct magnetic telegraphs. The government gives a bounty of 50 acres of land to each unmarried, and of 75 acres to each married laborer who shall come to Honduras to work on the road, and who shall declare his intention to become a citizen.

The joint protection of Great Britain and the United States is already extended, by the convention of the 5th of July, 1850, to this, in common with the other Isthmus routes of transit; and this protection is further specially guaranteed by a supplementary ar-

ticle in the treaty between Great Britain and Honduras, signed August 16th, 1856, "*against interruption, seizure, or unjust confiscation, from whatsoever quarter the attempt may proceed.*" This article has been adopted in like manner and in the same terms in the treaty between France and Honduras, signed July 28, 1857, and will be accorded, without doubt, by the government of the United States.

XIII. COMPARISON OF ISTHMUS ROUTES IN RESPECT OF PORTS.

"It is necessary to remark further, that, irrespective of climate and political considerations, there is one chief requisite, one main point to be insisted on, in connection with any route or line intended to be available for general utility, without which permanent success will be impossible. This indispensable adjunct is a *good port*. Without such a place of resort at *each end* of any canal or railway, easy of access, and sheltered at all times, shipping could not effect objects securely, and in definite times. Delay, expense, and risk must be the consequence of using a route unprovided with adequate harborage."—ADMIRAL FITZROY, *Journal Royal Geographical Soc.*, vol. xx., p. 165.

In order to institute a fair and impartial comparison between the various inter-oceanic routes, proposed or in actual operation, we must first inquire what are the purposes of each. Taking them in their order, Tehuantepec, Honduras, and Panama are claimed to be proper and feasible points for railways; Nicaragua and Atrato for canal communications. I here leave out the Chiriqui and Darien lines as exploded and impossible. Nicaragua is simply impracticable for a railway; that is to say, for a continuous road, leading from one ocean to the other. A road built up the valley of the San Juan River would require to be constructed through an unbroken wilderness, and, moreover, to be 119 miles in length; and even then, a change to boats would become requisite to pass the lake (which can not be turned), with a resumption of land-travel on the Pacific side. The geographical position of the

Atrato line, to say nothing of its proximity to the railway at Panama, renders a railway there unnecessary and valueless. The question of ports, then, as regards Atrato and Nicaragua, is of no consequence. It may nevertheless be observed that both are exceedingly defective in this respect. The line of transit at Nicaragua has absolutely no port on the Pacific; and an adequate terminus on that sea can not be found short of the port of Realejo, a distance of upward of 300 miles from San Juan de Nicaragua. The Atrato route labors under the same disadvantage on the Pacific, Cupica being small and exposed to the S.W.; while on the Atlantic the Atrato River has a bad bar, with only five feet of water.

Nor is it necessary, in this connection, to give much consideration to Panama. Its Atlantic terminus is not less than seven degrees of latitude to the southward of the corresponding terminus of the Honduras line, while its Pacific terminus is not less than four days' sailing distance below the latitude of the corresponding terminus of the Honduras line. Supposing all other circumstances to be equal, the saving in distance of the Honduras over the Panama line would decide the question of superiority immensely in its favor.

In the first place, the Bay of Panama, on the Pacific, is in no sense of the word a port; steamers, at best, have to lie several miles from shore, and passengers, freight, and supplies have to be embarked and disembarked in small boats and lighters; an operation which can only be performed at certain stages of the tide, and in bad weather can not be performed at all. Delay, danger, uncertainty, and expense are the necessary results of this deficiency.

The objections to Navy Bay (the Atlantic terminus of the Panama Railway), apart from its insalubrity, are not equally great; but this is far from being a safe port, inasmuch as it is open to the northeast, the direction from whence blow the heaviest gales. On the 31st of December, 1854, a storm from the northeast destroyed the wharves at Colon, and wrecked every vessel in the port. The American steamer "North Star" and the British West India steamer "Derwent" only escaped a similar fate by getting up steam and standing out to sea. A delay of two days in embarking the California passengers, mails, and treasure was the consequence.

It follows, then, that the routes which, in respect of latitude and consequent saving of distance, can bear a comparison with each other, are those of Honduras and Tehuantepec. In this respect, these are the only ones which meet the obvious requirements of commerce and travel. And here the general reader must bear in mind that, above latitude 14° N., the continent does not run north and south, but nearly east and west. The proposed northern terminus at Tehuantepec is in lat. $18^{\circ} 8' \text{ N.}$; that of Honduras in lat. $15^{\circ} 49' \text{ N.}$; the southern termini in lat. $16^{\circ} 12'$ and $13^{\circ} 21' \text{ N.}$ respectively. The absolute difference in latitude is, therefore, but $2^{\circ} 19'$; and although Tehuantepec is in long. $94^{\circ} 30' \text{ W.}$, and Honduras in long. $87^{\circ} 57' \text{ W.}$, it is immaterial, in the voyage from New York to San Francisco, for instance, whether the *westing* is made in the Gulf of Mexico or the Pacific—except perhaps that the Pacific is a smoother sea than the Gulf, and that it could be made in the first quicker and more easily than in the latter.

It would appear, then, that Tehuantepec has an ab-

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solute advantage over Honduras of $2^{\circ} 19'$ of latitude, equal to $4^{\circ} 38'$, or 270 nautical miles in the whole voyage, as between New York and San Francisco. But this *apparent advantage* is lost in consequence of certain difficulties in the navigation of the Gulf of Mexico, for all steamers from the Atlantic states must give the great bank of Campeachy, with its thousand reefs and low islands, a wide berth, by keeping far to the northward. They can not, as I have already said, safely steer in a right line from the Straits of Florida for Vera Cruz, but must make a circuit to avoid the Alacranes and other dangerous impediments to navigation to the north of Yucatan, upon which the British West India Steamship Company lost a number of their best vessels, until strict orders were given to have them keep well to the northward of the Campeachy bank.*

Calculating the deflection from this cause, not only is the apparent advantage in favor of Tehuantepec over Honduras lost, but the aggregate distance is so much increased as to give *an absolute advantage to the route via Honduras*.

We now come to the question of ports, upon which Admiral Fitzroy, in the quotation at the head of this section, has laid a stress which all who have investigated the subject know is none too emphatic. To avoid any imputation of unfairness in this matter, which is necessarily one of testimony, I shall content myself with quoting from authorities not open to suspicion, whose impartiality can not be called in question, and who establish the fact that Tehuantepec has

* The steamer "Tweed," belonging to this company, was lost on these reefs in making the voyage to Vera Cruz in 1847, as was also the steamer "Forth" in the year 1849.

no ports worthy of the name on either sea. In respect to the Pacific terminus,

“The port of Tehuantepec is not more favored by nature [than the coast of Nicaragua]. It gives its name to the hurricanes which blow from the N.W., and which prevent vessels from landing at the small ports of Sabinas and *Ventosa* (*Anglice*, ‘the Windy’).”—HUMBOLDT, *New Spain*, vol. i., p. 26.

Referring to Tehuantepec, M. Michael Chevalier observes that

“It would be necessary to remedy, if possible, the *want of a moderately convenient port* on the Pacific. Tehuantepec scarcely deserves the name of roadstead; the sea recedes day by day from its shores, the anchorage yearly becomes worse; the sand deposited by the Chimalapa increases the height and extent of the bars of sand at the entrance of the first lake, in the second, and thence into the sea, and already is Tehuantepec accessible to small vessels only.”—*L’Isthme de Panama*, p. 66.

In fact, the plan of employing what is called the port of Tehuantepec was formerly abandoned by the engineers of the Tehuantepec survey. They propose to create an artificial port at Ventosa, on the Pacific, by the construction of a “breakwater 2000 feet long.” The difficulty, not to say impossibility, of constructing artificial harbors to meet any important purpose is too obvious and well understood to require remark.

In one word, Tehuantepec has absolutely no port on the Pacific. It is even less favored on the Atlantic; nor is it claimed that there is here the *resemblance* of what is understood by a port.

This deficiency is proposed to be supplied by entering the Coatzacoalcos River, which is without shelter at its mouth, and which flows directly into the open sea. It has, moreover, a bar, which in bad weather would be impassable for vessels of 100 tons. “*At high*

water, on the full and change, the depth of water on the bar is about 13 feet, and falls as low as 11 feet," is the confession of those who have identified themselves with the Tehuantepec project. — *Major Barnard's Report*, p. 115. Upon this point the authority of General Orbegoso, who was first employed by Señor Garay to examine the Isthmus of Tehuantepec, can not be accepted. He reported 21 to 23 feet on the bar, while the engineers of the Tehuantepec Company found but from 11 to 13, and Commodore Perry but 12 feet. Señor Moro seems to have been of the same school. He reported 23 feet on the bar at Boca Barra, at Tehuantepec, where the authors of the Tehuantepec report found but 8 feet! Nevertheless, proceeding upon the erroneous assumption that the Coatzacoalcos carries 18 feet at its bar, instead of 10 to 13, Captain Liot, Superintendent of the British West India Steamers (*Considerations upon the Question of Communication between the Atlantic and Pacific Oceans*, p. 8), observes :

"The soundings given in the preceding remarks (even those most favorable to the Tehuantepec project) are evidently insufficient for large vessels with full cargoes; for although if the principal channel of the bar were always to maintain a depth of 18 feet (as Señor Orbegoso asserts it does, but afterward admits that 'under extraordinary circumstances, perhaps, it does not'), how is a ship of 600 tons burden, for instance, drawing 18 feet water at least, to pass it? If there were much swell on the bar, it would be perilous for vessels of even 15 feet draught to attempt it. Thus, then, this projected ship-canal would avail only for vessels of and under 300 tons burden, and in the season of 'norths' great risk would attend their approach to that part of the coast, where there is neither port nor shelter nearer than Vera Cruz (120 miles, upon a northwest bearing from the bar of the Coatzacoalcos); and during 'norths' the land thereabout is not only a 'dead-lee shore,' but it forms a perfect '*cul de sac*,'

out of which sailing vessels could not escape under canvas, except by risking the passage of the bar (which shifts), and that they would scarcely dare to do without a pilot; during a hard 'north,' moreover, the surf on the coast is so heavy that pilots are unable to 'board' vessels, whatever their distress or danger may be."

Colonel Abert, of the *United States Topographical Bureau*, in a review of the Transits, published by Congress, observes:

"The gulf bar can not be considered as affording more than 12 feet of water. *Upon the Pacific side there is no harbor.* . . Tehuantepec Bay is represented as shoal and much exposed, dangerous, and subject to frequent tempests."

Commodore Shubrick, commanding the Pacific squadron, in a letter to the Secretary of the Navy, dated October 7th, 1847, says:

"There is, I understand, anchorage in the Bay of Tehuantepec, but all accounts agree with the letters of Mr. Forbes in describing it as exceedingly boisterous. Captain Hall says the hardest gales he ever experienced were in that bay, and the Spanish call it Ventosa."

Again, J. H. Alexander, Esq., in a communication on the subject to a special committee of Congress, reported:

"What was said just now as to the defects of the harbor of Juan del Sur, in connection with the Nicaragua route, applies also to the consideration of another which has attracted much attention, I mean that over the Isthmus of Tehuantepec. . . In regard to the approaches, on either side, Nature has been unkind; and Ventosa Bay, on the Pacific, is in its very name ('The Windy') an apt expression for the character of the roadstead, while on the Coatzacoalcos side there is nothing to protect the entrance of that river from the northers of the Gulf of Mexico."—J. H. ALEXANDER, *Congressional Report*, No. 145, 1849, p. 44.

Lieutenant Colonel George W. Hughes, of the United States Topographical Engineers, in a letter to the Secretary of State on the subject of "Inter-marine Communications," sums up his account of Tehuantepec in the following words:

"One most serious objection to any communication across this isthmus for great commercial purposes is to be found in the want of safe and capacious harbors at either terminus. At the mouth of the Coatzacoalcos there is but $12\frac{1}{2}$ feet at low tide, and it is exposed to the full force of the northers which prevail from November till April. *I have seen thirty ships stranded in a single norther in the month of March.* It may be said that the bar may be removed, and an artificial harbor constructed at the mouth of the river. There is probably no more difficult problem in the science of engineering than the execution of such works under the best of circumstances; but I am far from asserting that skill and *money* may not accomplish them. The mouth of the Coatzacoalcos is peculiarly ill adapted to such improvements, which would scarcely be inferior in magnitude to the harbor of Cherbourg, and would assuredly require the munificence and resources of a Louis XIV. for their execution. The bar, created by the action of a certain natural law, would, if removed, be immediately re-formed by the same cause to which it owes its origin, unless that cause should be so modified as to direct elsewhere the deposition of earthy matter; and, in the present case, the question would be further complicated by the silting up of the artificial harbor, if one should be built. Supposing that such a harbor should be constructed, it would still be liable to the objection of the difficulty and danger of access, especially for sailing vessels, in the season of northers. . . The whole shore of Tehuantepec is subject to the visitation of terrific hurricanes (which take their name from the isthmus), sweeping with resistless fury along this inhospitable coast, where the tempest-tossed mariner seeks in vain for a harbor of refuge even for the smallest class of sea-going vessels. For this there seems to be no remedy; the genius of man can not control the storms, and Nature is constantly interposing new physical difficulties in the way of navigation."

As has already been observed, it has been proposed to remedy the deficiency of a port on the Pacific by the construction of an artificial harbor. To this end, it is designed to carry out a breakwater, 2000 feet long, to a depth of 36 feet. It is only necessary to look at the annual Congressional appropriations for breakwaters on our own coasts, apart from their original cost, and to consider their comparative inadequacy, in order to estimate the practical value of this proposition.

The official survey of the entrance of the Rio Coatzacoalcos by Commodore Perry, published by the government of the United States, shows but 12 feet of water on the bar, in a channel but 150 feet wide. Outside of the channel the water shoals rapidly to 11, 10, and 9 feet.

Experience has shown that the vessels employed in the California transit require the highest admissible tonnage, in order to give the requisite capacity and accommodation. The "Falcon," one of the smallest of the California steamers, carries 750 tons, and draws 15 feet of water, *or three feet more than the total depth of water on the Coatzacoalcos bar!* Tehuantepec, therefore, lacks the essential requisite of good ports: it has none worthy of the name, or capable of meeting the ordinary conditions of an inter-oceanic transit on either sea. It would be difficult, if not impossible, to find in the Gulf of Mexico, or any where else on the whole Atlantic coast of America, a more dangerous point, or one less suited for a terminus of a route of communication across the continent, than Tehuantepec. The northers sweeping down the great valley of the Mississippi have here their greatest force and influence, and, as observed by Captain Liot, no steamer or other vessel of ordinary sea draft could cross the Coatzacoalcos

bar during their prevalence, which is for six months in the year, from September to March. Ordinary waves are five or six feet from trough to crest; and with a moderate wind on shore, in conflict with the current of the river, the sea would break on the bar. Deducted from the total depth, no sufficient depth of water remains to float a vessel of a size and draft proper to venture on the open sea.

XIV. COMPARISON OF ISTHMUS ROUTES IN RESPECT OF DISTANCE AND ECONOMY OF TIME.

Although *time*, not distance, is the true measure of the relations of places, yet, as the saving of time depends more or less on the distance to be traversed, a shortening of distance must always be an important element in calculating the advantages of the respective routes which have been proposed between the oceans.

But this is only one element. Good ports, where vessels may embark and disembark their freight and passengers with rapidity at proper wharves, instead of through the means of small boats and lighters, is another important element to be considered, not only in respect of economy of time, but in respect also of convenience, cost, and security. Another element is a general sailing course free from opposing periodical winds, and other similar detaining and obstructing causes. And still another element, and one of primary importance, is the avoidance of harassing delays resulting from frequent transhipments. These not only consume time, but are fruitful in annoyance, and are a constant occasion of dread to the traveler. As I have already said, "frequent transhipments are inadmissible in any route of inter-oceanic communication looking to permanence."

I unhesitatingly claim for the proposed route *via* Honduras, in respect not only of distance, but in freedom from detentions and delays resulting from bad ports, adverse winds, and frequent changes, a clear and emphatic superiority over all routes which have been proposed across the Central American Isthmus.

The distances from Liverpool to San Francisco, touching at Jamaica, by the various routes in existence or proposed, are as follows :

<i>Via</i> Panama	7980 miles.
“ Nicaragua	7720 “
“ Tehuantepec	7740 “
“ Honduras	7320 “

The distance from New York to San Francisco, as also the distance from New York to Callao and Valparaiso, are as follows :

	Via Panama.	Via Nicaragua.	Via Tehuantepec.	Via Honduras.
NEW YORK				
To San Francisco .	5224	4700	4200	4121
“ Callao	3500	3600	4080	3540
“ Valparaiso . . .	4760	4980	5400	4800

The positive saving in distance which the Honduras line would afford over Panama, in the voyage from Great Britain to California, would be, therefore, 660 miles ; over Nicaragua, 400 miles ; over Tehuantepec, 420 miles ; and in regard of distance, and as respects the South American ports, the line would be more favorable than Tehuantepec, and nearly as favorable as the others. As regards New York and the Atlantic States of the Union, the gain over Panama would be 1100 miles ; over Nicaragua, 580 miles.

But, as already observed, the *shortest steaming course* is not always a practicable one. Thus, after passing

the Capes of Florida, steamers can not safely steer direct for Vera Cruz or Tehuantepec. They must keep well to the northward to avoid the dangerous reefs, shoals, and low islands, elsewhere alluded to, which embarrass the great Campeachy Bank to the north of Yucatan. This *detour* augments the sailing distance between New York and Tehuantepec several hundred miles, and thus increases the relative superiority, in respect of distance, of the proposed Honduras route. But, I repeat, *time*, not *distance*, is the true measure of the relations of places. The time now occupied in making the voyage between New York and San Francisco, as appears from official tables, is as follows :

Average passages for 1855, *via* Panama, 24 days, 9 hours.

“ “ “ “ Nicaragua, 22 “ 22 “

That is to say, San Francisco, in respect of time, is farther from New York than Constantinople, Cairo, or St. Petersburg! It is evident that every interest, commercial, political, and social, not only of the United States alone, but of the world, requires that this waste of time shall be obviated; and in a case where such important relations are involved, the saving of a single day becomes an object worthy of the exertions of all public-spirited men.

Now the difference between the Honduras and Panama routes, in point of absolute distance, is about *one fifth*. All other circumstances, therefore, being equal, the opening of the Honduras road would effect a saving of *five* days.

But the greater facilities which Honduras affords, resulting chiefly from the possession of unexceptionable ports, will augment that saving from *three* to *five* days more, or to from *eight* to *ten* days in all; that is to say, reduce the voyage from twenty-four days and a half down to fourteen days.

How serious are the natural difficulties which embarrass the route by the way of Panama, will appear from the fact that, allowing 12 miles per hour for ocean steaming, 20 miles per hour for the rail, and four hours each for embarking and disembarking, the whole voyage (5175 miles by sea, and 49 miles by rail) should be performed in 21 days 12 hours. The difference between 21 days 12 hours and 24 days 9 hours, the time actually consumed, is therefore due to the natural deficiencies above indicated, and which, at whatever expenditure, can never be wholly remedied.

All other circumstances being equal, the *saving of time* which the opening of the Honduras route would effect, as between Europe and the Atlantic States of the United States and California, would give it a practical, if not an absolute monopoly of travel and of traffic. But when we add to this the comparative ease and cheapness with which the transit would be effected, as compared with the frequent charges and transhipments on the Nicaraguan line, and the difficult and costly embarkations and disembarkations at Panama, then this advantage becomes largely enhanced. Add, also, the important fact of a salubrious climate, and the great superiority of the Honduras route becomes manifest, and warrants the conclusion that it would attract the entire travel between the two seas. The mails and treasure would necessarily take the speediest route, and a large amount of freight, which, in consequence of the difficulties I have enumerated, can not now be carried over the Panama or the Nicaragua route, would also take this direction.

That passengers will always seek the shortest and speediest route between given points, is shown from the fact that the Nicaragua transit, although greatly

inferior in ease and comfort to that of Panama, has nevertheless carried nearly one half of the California passengers, from the simple circumstance of being *one day and a half* shorter than the latter.

Next, as regards Australia: for the year and a half ending January 1st, 1856, the passage of the mails from London to Melbourne occupied an average of 95 days, and from Melbourne to London 85 days. The distance from Liverpool to Melbourne *via* Honduras has been calculated with care, and found to be 12,341 miles. At an average rate of steaming of 12 miles per hour, and allowing five days for coaling and transshipment, the voyage could be performed in exactly 47 days 20 hours; or, calculating steaming at 10 miles per hour, and allowing the same time for detentions, in 56 days 10 hours; in the former case effecting a saving of 47 days in the *outward*, and 37 days in the *inward* voyage.

Although the saving of distance *via* Honduras over that *via* Panama, in the voyage from Great Britain to Australia, is but slight, still, should a line of steamers be established between the mother country and her Australian colonies, the paramount considerations of good ports, salubrious climate, the possession of coal on the Pacific, and abundant supplies, would necessarily determine the Isthmus of Honduras as the point where the continent would be crossed.

XV. COMPARISON OF THE ISTHMUS ROUTES IN RESPECT OF SAFETY.

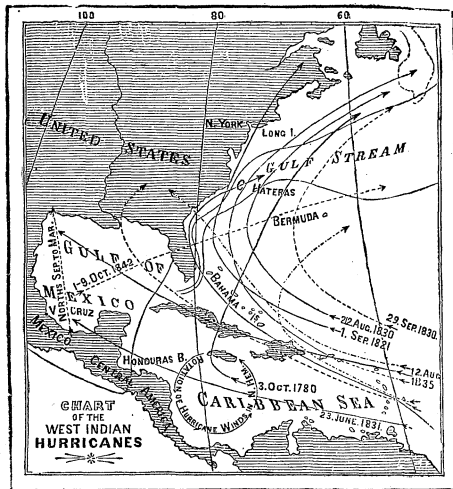
In fixing upon a permanent route of inter-oceanic communication in this age of scientific research and discovery, we are called upon to take into consideration not only the more obvious and palpable conditions requisite to the success of such an enterprise,

but the incidental circumstances which may affect it. Within a few years attention has been directed to winds and currents in their influences on navigation and commerce, and their careful investigation has already led to important results, which are practically exemplified in enabling vessels to make their voyages with increased rapidity and safety. The aggregate of saving of time and property, and of life, more valuable than all, is but imperfectly comprehended by the public.

Now, in making the voyage to the Central American Isthmus, vessels are not only obliged to traverse more than 1000 miles of the Atlantic, the most turbulent of oceans, but, in order to avoid the currents of the Gulf Stream, to pass to the windward, or eastward of Cuba. The outward, and often the return track of the Panama and Nicaragua steamers is between Cuba and Santo Domingo, and of course to the eastward or outside of Jamaica.

As a consequence, no sooner do they pass from the stormy Atlantic than they enter precisely that part of the Caribbean Sea most frequently swept by hurricanes. The two great centres of these terrible elemental visitations are the West Indies and the China Sea. Beyond these limits they are of comparatively rare occurrence. Professor Johnston, in his standard *Physical Atlas*, gives a chart showing the general course of the West India hurricanes, and also a table exhibiting the date, and, so far as known, the course of the principal ones that have occurred during the past 150 years. From these it will be seen that the West India hurricanes commence near the Leeward Islands, sweep toward the northwest, taking Jamaica and Santo Domingo in their course, and, after reaching the Gulf Stream, are deflected in the direction of its current to

the northeast. They all, therefore, as well as the few which reach the Gulf of Mexico, cross the track of the Panama and Nicaragua steamers and vessels.



It will be observed that of the 50 hurricanes, the ranges of which are given by Professor Johnston, but *two* crossed the route which is proposed to be followed by the Honduras line, namely, by land to Florida, and thence by steamers to Puerto Caballos.

Again: it is precisely in the line of all communication with Nicaragua and Panama that we find the region of rotatory or Caribbean hurricanes, as laid down by the same authority. These would be wholly avoided by taking the direction of Honduras.

Hence it appears that the proposed route of inter-oceanic communication by way of Honduras would be almost entirely free from the dangers resulting from hurricanes. When we consider that not far from 75,000 persons now pass annually, by way of the Isthmus, from the Atlantic to the Pacific coasts of the continent, security from dangers of this kind becomes an

important consideration. The destruction of a merchant vessel, at the worst, involves but the loss of ten or twelve lives and a few thousand dollars of property; and, however deplorable the catastrophe may be regarded, it sinks into insignificance when compared with the loss of a California packet, with its five or six hundred passengers and millions of treasure. An important result, therefore, is gained if danger from this source be obviated or diminished; for any diminution of the contingencies of travel must be regarded as a public good.*

There is still another point in the chart of Professor Johnston which deserves notice in this connection. It is the course of the "northers," or dreaded north winds of the Gulf of Mexico, which have been so often productive of the greatest disasters to shipping. These winds sweep down the valley of the Mississippi, and across the Gulf of Mexico into the bight of the gulf lying between the peninsula of Yucatan and the lower states of Mexico. They blow with more or less constancy, and often with terrible force, for six months of the year, from September to March, on nearly a direct line from the mouth of the Mississippi to the Isthmus of Tehuantepec. As they advance across the Gulf, their force is augmented, and the contraction of the land contributes to give them a power, at times, almost equaling the hurricanes of the Antilles. This fact, in conjunction with the circumstance that Tehuantepec has absolutely no port at its northern or gulf terminus in which steamers or sailing vessels could

* Since the above paragraphs were first printed, they have received a fearful illustration in the loss of the steamer "Central America" off the coast of Carolina in September, 1857. This disaster involved a loss of not less than 460 lives, and nearly \$2,000,000 of treasure, apart from other valuable property.

find refuge, demonstrates its utter inadequacy for the great purpose of inter-oceanic communication. The impossibility of any vessel entering the River Coatza-coalcos, which opens due north, over a bar on which the maximum of water never exceeds thirteen feet, during the prevalence of the northers, when the waves run to half that depth, and leave scarcely more than a fathom of water on the bar, is obvious to the dullest apprehension and the most prejudiced mind.

XVI. TRANSMISSION OF INTELLIGENCE.

Let us consider, for a single moment, the relations in respect of transmission of intelligence which the proposed work would open up. I take it for granted that the Atlantic telegraph will be laid down within the present year, and thus put London in, I may say, instantaneous communication with every part of the United States—with the far-off prairies and the southernmost capes of Florida. From the point last named to Havana, in the island of Cuba, is but 130 miles. To continue the connection thence to the Bay of Fonseca, it will only be necessary to construct 180 miles of land telegraph to Cape San Antonio, 270 miles of submarine telegraph thence to the British establishment at Belize, 120 miles of submarine telegraph thence to Puerto Caballos, and 200 miles of land telegraph to the Bay of Fonseca. That is to say, assuming the telegraph connection with Havana complete, a supplement of 340 miles of land and 430 miles of submarine telegraph would complete the communication between London, New York, Havana, and the Bay of Fonseca! In other words, it would put London within eight days of San Francisco, six days of Callao, ten days of Valparaiso, and 35 days of Australia.

At present, the naval stations, both of the United States and Great Britain, in the Pacific, are established at Valparaiso. Orders from London to the British Pacific squadron have, therefore, not only to traverse the Atlantic, but nearly the whole western coast of South America to reach their destination. Now, as nearly all the points on the Pacific where the services of national vessels would be required lie not only to the northward of Valparaiso, but to the north of the equator itself, it follows that vessels assigned to any specific duty would be required to *sail back* over the line which their orders had traversed, and, in case of sailing vessels, be subject to weeks of detention in passing the latitude of calms and variable winds. Thus, if a steamer were selected for duty, say at Acapulco, on the coast of Mexico, her orders would have to go 2880 miles out of the way to reach her in Valparaiso, and the vessel afterward would be obliged to sail 3480 miles to arrive at her destination! The time between the issue of the order and its execution, under no circumstances could be less than 45 days.

Let us imagine the Bay of Fonseca, which has every facility for the purpose, to be fixed upon as a naval station in the Pacific, and the telegraphic communication complete. In such event, orders issued from Washington or London would be able to reach the Pacific squadron within a single day, and, in the supposed case of a vessel destined to Acapulco, be executed within four days from their issue. And what is true of Acapulco would be true, in equal proportion, in the discharge of whatever service might be required of a squadron in the Pacific, whether on the western coast of America, the eastern shores of Asia, or at the islands of the Pacific. Hence may be deduced, and fair-

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ly, the importance of the proposed work in a governmental and executive point of view.

XVII. COMMERCE OF THE PACIFIC.

In the chapter on the proposed Nicaraguan Inter-oceanic Canal I have enumerated certain countries on the Pacific with which commerce would be facilitated by the construction of railways or canals across Central America. The actual trade with those countries, passing round Cape Horn or across the Isthmus, carefully calculated for the year 1854, presents the following aggregates, which have since been largely increased:

Number of vessels employed	3,513
Tonnage, outward bound tons	1,461,000
Tonnage, inward bound tons	1,418,000
Value of imports	\$44,815,000
Value of exports	\$110,065,000

In other words, the commercial values which took this direction in the year 1854 amounted to a grand aggregate of \$154,880,000. This is exclusive of the Australian trade, of which but a little more than \$2,000,000 in value passed by the routes in question.

I shall not here discuss the probabilities of the trade of the British Australian colonies taking a direction across Central America, but content myself by saying that, exclusive of gold, the imports and exports of these colonies, collectively, for 1855, amounted to the following totals:

Exports	\$36,075,000
Imports	42,515,000
Or to a grand total of	\$78,590,000

The commerce of California now, of course, constitutes the largest item in the aggregate of trade with

the ports of the Pacific. But, leaving California and Oregon aside, we find that the commerce of the United States alone, with these ports, rose from 626 vessels of 244,000 tons, in 1849, to 1856 vessels and 957,500 tons in 1854; and that its imports and exports increased, in the same period, from \$17,001,320 to \$33,963,000, or about 100 per cent.

Although the gold of Australia does not now flow across Central America, yet I have included its annual and aggregate product in the following table, as a possible, if not a probable future contribution to the traffic of that railway across the Isthmus which shall best meet the requirements of commerce:

Year.	California.	Australia.	Totals.
1848..	\$60,000	.....	\$60,000
1849..	8,000,000	.....	8,000,000
1850..	25,000,000	.....	25,000,000
1851..	40,000,000	\$4,535,665	44,535,665
1852..	56,000,000	48,575,515	104,575,515
1853..	60,000,000	52,228,500	112,228,500
1854..	68,000,000	45,150,000	113,150,000
1855..	64,540,000	57,500,000	122,040,000
	\$321,540,000	\$207,989,680	\$529,589,680

We see that gold was discovered in California in 1848, in which year the production was \$60,000, rising in 1855 to \$64,540,000. It was discovered in Australia in 1851, in which year its production was \$4,535,665, rising in 1855 to \$57,500,000. • The production for 1856, in both countries, it is estimated, will show a considerable increase on these aggregates.

The gold crop of California will necessarily pass over Central America, in its direct and inevitable voyage to the great commercial centres of the world—New York and London. But this is not the whole amount of treasure which must take the same direction.

The bullion of Chili, Peru, Ecuador, and the West Coast of Mexico, not to mention the present considerable and the prospective large contribution from Central America itself, will go to swell the precious aggregate. Taking the latest official returns, and, in their default, the best estimates, we get the following annual contributions to the metallic wealth of the world from these comparatively unnoticed sources.

Chili (1854, estimated), silver and copper .	\$12,000,000
Peru (1854, official), gold and silver . . .	5,250,000
Bolivia (1852, estimated), gold and silver .	2,000,000
Ecuador (1854, estimated), ditto .	3,000,000
New Granada, gold and silver, say . . .	1,000,000
Mexico, West Coast (1854), gold and silver .	6,000,000
Central America in general, gold and silver .	2,500,000
Total	<u>\$41,750,000</u>

These figures are rather below than above the fact, but nevertheless show that the product of the precious metals on the western coast of the American continent, and of which the natural flow is by the speediest and safest route across Central America, amounts annually to upward of \$95,000,000, or £19,000,000, or nearly twice the average amount of bullion in the Bank of England.

Let us now recapitulate the annual value of that commerce which the proposed railway would, to a greater or less degree, accommodate, and which is interested in its construction:

Aggregate general commerce with the principal Pacific ports, exclusive of Australia	\$154,880,000
Commerce of Australia (1855)	78,590,000
Australian gold (1855)	57,500,000
Total	<u>\$290,970,000</u>

To say nothing of the mails, there is another im-

portant element to be considered in this connection : I mean the passenger traffic between the seas, between Great Britain and Australia, and between the United States and California.

Number of Passengers going from the United Kingdom to the Australian Colonies.

Year.	Number of Emigrants sent out free by Commissioners.	Number of Persons proceeding by their own Means.*	Total Emigration.
1853 . . .	27,723	33,678	61,401
1854 . . .	41,065	42,172	83,237
1855 . . .	28,016	24,293	52,309

The arrivals and departures at San Francisco *via* the Isthmus of Central America have averaged for the past three years, 69,521 per annum. This number is irrespective of the passengers for Chili, Peru, and the Pacific ports generally, who would probably swell the aggregate to upward of 80,000.

XVIII. ESTIMATED REVENUES.

In respect to the revenues of the proposed road, it must always be remembered that its construction is required by an *existing travel and commerce*, adequate not only for its support, but to give a large return upon the capital invested in it. The positive and immediate sources of revenue are, passengers, the public mails, transportation of bullion, express freight, and general traffic, in all of which there is a constant and rapid increase. The value of these items may be sufficiently gathered from the previous paragraphs on the "Commerce of the Pacific."

But there are other considerations connected with the project of opening a railway through Honduras, and among them, the fact that the country itself has

* This class of passengers is always proceeding, without reference to the others. It is impossible to say how many return *from* Australia annually.

vast resources, mineral and agricultural, which the construction of the work would rapidly develop, and which, in turn, would create a profitable and constantly increasing traffic for the road. It is not too much to anticipate that a country so favored in respect of soil and climate would attract to its shores a large emigration, just as soon as the establishment of lines of steamers and the opening of interior means of communication would enable men to direct their enterprise thither with a prospect of advantage.

Nor, in calculating its probable revenues, should we neglect to consider the important and valuable products of the Pacific coast of Central America, which now chiefly pass around Cape Horn. These consist of articles small in bulk, but of great value, such as coffee, cacao, bullion, indigo, and cochineal. All of these articles, as well as the return supply of goods for the consumption of the country, would be sure to pass over the Honduras road.

Apart, however, from all speculations of this kind, there exist positive data for estimating the annual revenues of the proposed road, derived from the experience of the Panama Railway. For the year ending January 1st, 1856, it appears from an official statement published by the directors that the gross earnings of the road were \$1,166,552; expenses, repairs, interest on bonds, etc., \$395,345; leaving a net profit of \$771,237, out of which were paid two semiannual dividends of 6 per cent., equal to 12 per cent. for the year, with \$133,165, or 3 per cent. undivided surplus. The earnings for the year were 15 per cent., against 12 per cent. estimated.

For the year ending January 1st, 1857, the gross earnings of the road were \$1,459,525, an increase of

about \$300,000 over 1856; expenses, repairs, interest on bonds, etc., \$530,252; leaving a net profit of \$929,273, out of which were paid two semiannual dividends of 6 per cent., equal to 12 per cent. for the year, with \$344,216, or about 3 per cent. undivided surplus.

These earnings, it should be remembered, have been made on a divided travel, the transit route *via* Nicaragua, as we have seen, carrying very nearly one half of the passengers between the seas.

It will be said that the opening of the Honduras route will induce great competition on the part of routes already established, leading to great reductions in rates, and consequent diminution of revenue. These rates are at present exorbitant, and should be reduced. To effect such reduction is precisely one of the grounds upon which the promoters of the Honduras route may base their appeal to the public support.

Putting the prices to be charged on passengers and freight at *two thirds* of the prices now charged on the Panama road, we have the following summary of the estimated annual business of the Honduras road :

SUMMARY OF REVENUES.

50,000 passengers, at \$17.	\$850,000
\$80,000,000 precious metals, at $\frac{1}{4}$ per cent.	200,000
English and American mails	150,000
*2000 tons express freight, at \$133 per ton	266,000
100,000 tons general freight, at \$22 per ton	2,200,000
Commerce of Central America, 2 per cent. on \$6,000,000	120,000
Local travel and trade	50,000
Gross total	<u>\$3,836,000</u>
Estimated expense of working road	600,000
Government of Honduras	50,000
Net total	<u>\$4,486,000</u>

In this estimate I have included only *five eighths* of the passengers; but it is probable that the road would carry *seven eighths*, and thus raise the receipts on account of passengers from \$850,000 to \$1,190,000. Furthermore, the number of passengers is regularly increasing; and, by the time the proposed road could be built, would probably equal 100,000 per annum, exclusive of those going to and from Australia.

The estimate as regards *freight* is on less than 5 per cent. of the aggregate amount now passing between the oceans.

Upon the above basis of calculation, which is in all respects a moderate one, we find that the annual net profits of the road could not be less than 31 per cent. on a capital of \$10,000,000, and of 15 per cent. on a capital of \$20,000,000.

The revenues which would arise from the apprecia-

* The present charge of the express companies from New York to San Francisco is 35 cents per pound, or \$700 per ton. The conclusion follows, that as there is a class of freights which can bear this charge, there is a much larger class of freights which can bear the estimated rates for goods not express.

tion of the lands of the company, and their sale, in a country likely to attract a large emigration, are not included in this estimate. It is calculated that within fifteen years these lands would repay the capital required for the construction of the road. The amount of lands belonging to the company by grant or purchase will fall very little short of 1,500,000 acres, equal to 9320 acres for each mile of road. In the case of the Illinois Central Railway, the concession of lands was 3840 acres for each mile of road—considerably less than one half the amount granted to the Honduras enterprise. Now, in estimating the value of these lands, we must remember that they are in a country rich in minerals and natural resources, and which has advantages in respect of climate and geographical position equal to any other under the tropics. We have a right, therefore, to conclude that they will rapidly attract a foreign emigration, more especially from the circumstance that the three great nations of the world unite in guaranteeing the country from those disturbances which elsewhere on the Isthmus have rendered life and property insecure. It is true that emigration does not now direct itself to Honduras; but when the proposed work is commenced, under the new political auspices and commercial relations of the country, he must be a bold man who will venture to predict that the emigration thither will fall relatively below the annual maximum to any part of the United States.

There are other considerations, which, although not directly connected with the profits of the proposed road in itself, should not be overlooked; I mean the great public advantages which would result from the opening of the proposed communication. It is demonstrable that, if the road were built, there would be an ab-

solute average saving of time in the voyage between the Atlantic states and California of not less than eight days. It would therefore result,

I. That, on the basis of 70,000 passengers per annum, there would be an aggregate annual saving of 560,000 days to the public. At two dollars per day, a low valuation of time in the United States, this would equal \$1,120,000.

II. The saving in the form of interest, insurance, etc., etc., on the precious metals in transit.

III. The saving of from eight to ten days in the transmission of the mails, and the consequent increased facilities in the transaction of business as between the Atlantic and Pacific coasts of the continent.

MISCELLANEOUS NOTES.

A.

(Note to Chapter III.)

THE RELATIONS OF RACES.

THE views advanced in Chapter III., on the relative influences which different races of men exert upon each other, and the laws which govern their contact, have been seriously called in question by a number of writers of undoubted ability and unquestioned scientific integrity. It may be doubted, however, if their reasoning can be accepted as against the combined evidence of all competent authorities; for the problem involved is one which can only be solved by experiment; and it is worthy of remark that all, or nearly all, whom personal observation and experience have qualified to speak on the question, bear nearly the same testimony, and hold nearly the same views. The subjoined paragraphs in point have fallen under the notice of the author as these pages are passing through the press, and are adduced for the consideration of those who may be interested in this somewhat abstruse ethnological question.

“It is worthy of remark that an admixture of European blood invariably has the effect of deteriorating the race in which it occurs—a fact little calculated to flatter the obstinate prejudices that most of us entertain respecting the natural superiority of our own species over that which is indigenous to any other quarter of the globe. The mulattoes of the West Indies are generally persons of feeble organization and imperfect mental development, and no class of people, savage or civilized, have so seldom distinguished themselves in any way. In them are alike neutralized the physical strength and habitual vivacity of the negro, and the sound judgment and comprehensive facul-

ties of the European, and it is their nature to sink into a subordinate sphere, among whatever people and in whatever circumstances they happen to be placed. The annals of the African race present us with a Toussaint, a Dessalines, a Trudo, and a Christophe, whose talents and courage were conspicuous and indisputable. The only mulatto hero on record is the insurgent Ogé, who shed tears on being led to execution, and purchased a day's respite from death by revealing the names of his fellow-conspirators!

“The above remarks apply also to the half-castes of India, whether of Portuguese or British descent. They exhibit neither the rotund and well-proportioned forms of the natives of Hindustan nor the muscular vigor of Europeans, but are meager in their bodies, and incapable of continued physical exertion. They, however, possess much acuteness and a docile capacity, but these qualities are rendered inefficient by their indolence, and by the small ambition which they have to shine and excel. The character of the Portuguese mulattoes on the West Coast of Africa has been mentioned in another part of this work. The people, from their youth up, present a frightful spectacle of physical languor and emaciation, and the strangers visiting Cacheo and the island of St. Thomas, where they chiefly reside, shudders as he walks through streets where the surrounding passengers resemble corpses set in motion by mechanism. The men are mostly pirates and robbers, and the women prostitutes. Shall we be able to vary this picture of human deterioration by turning our view toward America? On the contrary, the mestizos of Quito, Mexico, and Vera Cruz—in other words, the offspring of Spaniards and Indian women—differ little from the mulattoes of Asia or Africa, except perhaps in their being even more indolent in their nature than the other two.”—*European Colonies in various Parts of the World, viewed in their social, moral, and physical Conditions, by John Howison, in the East India Company's Service, etc., etc.* London, 1834, vol. ii., p. 333.

B.

(*Note to Chapter VIII.*)

“FUENTE DE SANGRE.”

The subjoined letter from J. L. Le Conte, M.D., of Philadelphia, giving an account of his visit to the so-called “Fuente de Sangre,” mentioned on page 146 of this volume, will be read with interest. The explanation of the phenomenon presented by Dr. Le Conte will probably be received as conclusive and satisfactory by the scientific world.

“Philadelphia, April 15, 1858.

“*My dear Sir,*—In answer to your request for a brief account of my visit to the ‘*Fuente de Sangre*,’ in December last, I have the pleasure to send you the following notes regarding a portion of my trip. You have yourself so fully examined and made known the prominent features of the country which I passed over, as far as Intibucát and Yamalanguira, that I shall include in my account only the portion from those places to La Virtud.

“Leaving Intibucát on the morning of December 1st, we rode over a gently undulating country, with hills, principally of white sandstone, variegated with beds of yellow and red clay. The road for a few miles beyond Yamalanguira is abundantly strewn with pieces of black obsidian; these disappear afterward in a southwest direction, and I do not know from what volcano they have been derived. Colossal blackberry bushes, with abundant fruit, just beginning to ripen, lined the road in many places. The forests are chiefly of oak and pine, and the country is well watered. After a ride of eleven or twelve miles, we arrived at the descent of the immense hill of Yolula, about 3000 feet, and very abrupt. The termination of the rainy season was here celebrated by the Indians of the neighboring *pueblo* turning out *en masse* to repair the road, which, indeed, notwithstanding their labor, was barely passable. On the opposite side of the stream we slept in a sugar-mill, and, resuming our journey next day, after crossing a series of equally abrupt ascents and descents, interspersed with some beautifully undu-

lating grassy plains on the tops of the mountains, and delicious views of others in distant valleys, and occasionally a sight of the volcanic chain of San Salvador, we arrived, without any particular adventure, at Erandique, about eight or nine miles from our resting-place.

“Erandique is a straggling village of about 1200 inhabitants, in a beautiful plain, bounded on the southwest by a high, abrupt chain of mountains, but in other directions separated from other plains and undulating prairies by hills of moderate height. The climate is delicious ; the peach, fig, and plantain are seen growing side by side, and all in an equally luxuriant condition.

“The place is chiefly important on account of the occurrence near it of mines of precious opal, of a quality fully equal to the finest Hungarian. The space within which these beautiful gems occur is sufficiently ample, extending for several miles ; but the indolence of the people, and perhaps, also, the insecurity of property, are such, that not more than twenty or thirty workmen are employed in mining, and that for only a small portion of the year. The excavations are superficial, and made without judgment, yet, wherever made, seem to furnish specimens of good lustre, though not always of sufficient size to be used by the lapidary. The finest pieces are frequently injured by the careless manner in which the rock is broken.

“Leaving Erandique the next day (December 3d) with my servant, we ascended the great chain of mountains above mentioned by a very abrupt and laborious path. On the top is a gently undulating surface of great extent, with many *milpas* of considerable size. The forests are chiefly of oaks, and nothing reminds the traveler of the tropics except the *epiphytes* with which they are occasionally covered. Here abounds the *granadilla*, a delicious fruit, produced by a species of *Passiflora*. Here grow in perfection potatoes and wheat, and, with advancing civilization, will be raised all the productions of the temperate zone. Passing on, we arrived at 11 A.M. at a shed, called Guatemalita, the thermometer standing at 69° Fahr. The road then ascends within two or three hundred feet of the top of a ridge running north and south (like all the others in this elevated region), which is Mount Congolon, the highest in Hondu-

ras.* The view is wonderful: the whole state of San Salvador, from San Miguel to the Guatemalan boundary, with its mountains, its rivers, and even its cities, lay at my feet. The chain of volcanoes limited the view, and many of the cones were throwing forth wreaths of white smoke, while in the nearer valleys could be frequently seen the more vigorous, though smaller jets of the *infernillos*. Beyond the lower portions of the chain was a broad expanse of the Pacific, distant at least 60 miles. The details of the view came out in the pure atmosphere of the tropics with a distinctness of outline that was marvelous, and it was, indeed, a Bauerkeller's Chart, of natural size, so clearly were even the smallest elevations rendered apparent.

“But a dreadful task was now before us. The village of La Virtud was visible. Its distance was from twelve to thirteen leagues; the descent abrupt, in many places absolutely precipitous; the country broken up into steep ridges, most of which seemed to be spurs of the immense mountain mass on which we stood. However, thinking more of the magnificence with which our eyes were feasted than of the labor either to ourselves or our mules, we commenced the descent. It was particularly tantalizing to see the little town of Gualzinze, with its snow-white church, fully two hours before we reached it, yet lying, as it were, at our feet. Failing here in my efforts to hire fresh mules, I proceeded down an equally abrupt descent to Joconguera, beautifully situated in a small valley between two of the great spurs already alluded to. Here lives Jose Maria Cisneros, a senator, and a man remarkable for his appreciation of learning and his desire for the improvement of his people. He was anxious to procure an iron bridge for a small stream which flows just by the village; but I fear, with the bad roads, it would be difficult to place such a structure in this remote region.

“Here resting for the night, I started at 3 A.M. for Mapulaca, which I reached about 7, after a tedious ride in the moonlight and early morning. The descent was less precipitous than yesterday, and at Mapulaca almost ceases; the country, though very hilly, being nearly on a level with the valleys of the Lempa

* On my return, I found the temperature at this point, at 5 A.M., only 49°, quite low enough to numb the hands, and render journeying disagreeable.

and Moçal. Crossing the latter river at its confluence with the Lempa, which is here much obstructed with rapids for the space of a mile or a mile and a half,* we rode over a very bad path to a ranch called 'El Nombre de Jesus,' at which I saw greater evidences of industry than in any other place in Honduras. It was pleasing to see a large, stout, patriarchal-looking individual, surrounded by about thirty women and children, of different degrees of consanguinity, some husking maize and putting it in sacks, others preparing the grain for the inevitable tortillas, which, indeed, have to be issued in a tolerably steady supply to satisfy such a numerous household.

"Without stopping to rest, we were, by the kindness of the patriarch, furnished with a guide, whom we followed about two miles over a broken country, but one well suited for agricultural purposes. Here we left our beasts on the side of the stream, which enters a cañon with perpendicular walls about 40 feet high, while the thick brush which covers the hill forbids any passage above. I had to creep along the walls of this cañon barefooted for the distance of about 300 yards, a walk which the frequent occurrence of Agave and Cereus rendered by no means pleasant. I then reached, by crossing the stream, the principal cave from which issues the *fuenta de sangre*. Another is said to be lower down the stream; but progress was so difficult, and time so short, and the heat so oppressive after the cool climate of the mountains, that I was willing to take its existence on hearsay. This principal cave is a fissure about 15 to 20 feet high, and five or six wide at the entrance, but rapidly narrows, so that a man can only follow it for a distance of about 30 or 40 feet. It abounds in bats, which cling in masses from the narrower parts of the fissure. The stench is strongly ammoniacal, and so intense that I was obliged to retreat thrice before I could procure, from the innermost part that I could reach, a sufficient quantity of the material to fill the bottles of alcohol I had carried with me for the purpose.

"In the rainy season, a small current of red matter, like blood, flows from the cave into the stream; but in the dry season the water ceases to percolate through the roof and back of the cave,

* I am informed that no impediments exist above or below this point.

and the flow ceases. At the period of my visit it had already stopped, but the floor of the cave was covered two inches deep with a pasty mass, which gave a blood-red color when mixed with water. It was full of larvæ of insects, and altogether in a useless condition for examination. On the sides of the cave were masses looking like dried blood, which had run down from above, and in the narrowest parts I could reach in the recess of the fissures, I collected with my knife some fresh semi-fluid matter that the insects had not attacked. Examined with a microscope on the spot, it exhibited no living particles, nor, in fact, any thing but minute fragments of the digested debris of insects.

“Opposite to the principal cave are two small ones, which contain the same material, and, not being fissure-like, enable the whole of their interior to be examined. I found the roof and back of these cavities entirely clean, so that it was evident that the material did not come through the rock, but consisted merely of the excrement of the bats which take refuge in the cave; the coloring matter is either peculiar to it, depending on the nature of the food, or perhaps developed by fermentation, as is the case, to a certain extent, with the well-known murexide. Fearing the effects of the thorny plants if I should return along the wall of the precipice, I made my way in the bed of the stream, alternately jumping, wading, climbing, and swimming to the place where we left the beasts. I will not detain you with a narrative of the incidents of my return to Erandique, but can not close without expressing my thanks for the interest expressed by the inhabitants of all the villages visited by me in the object of my journey, and the uniform kindness and hospitality with which I was received. In this almost inaccessible corner, which revolutions have left unspoiled, the manners of the inhabitants contrast most favorably with those observed at Intibucat, Lepasale, and other portions of the state in the line of march of the armies which periodically disturb the country, and prostrate every branch of peaceful industry.

“For the purpose of rendering the present account more complete, I have appended notes, giving some views recently published regarding the Fuente de Sangre, and also the result of a

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chemical examination of the material, and remain sincerely
yours,

JOHN L. LE CONTE.

“NOTES.—1. In the *Cronica de Costa Rica* of December 9th, 1857, is a graphic account of the cave and its vicinity, evidently by a person who had gone through the toil of a visit, but the attempt at an explanation which concludes the account is suggestive of a very elementary condition of science. I transcribe the passage in the words of the writer. After speaking of the view that the color perhaps depends on the rapid generation of infusoria, he says :

“Sin combatir precisamente la opinion de aquel viajero, pareceme que puede atribuirse á ellos la propiedad que tiene el liquido á corromperse pero no la del color pues habiendo profundizado sobre la caberna y despues sobre otra pequeña que descubrí en la orilla opuesta del rio como á unos 300 pasos al oeste, encontré tierra en abundancia de la colorada que ya he mencionado la cual disuelta en agua produce un liquido del color de la sangre con corta diferencia; el sedimento que deja esta tierra bien molida como el que se desprende de la sangre de la gruta por medio del ácido de limon sujeto al ajente químico mas fuerte que es el fuego se carboniza y quasi metaliza, viniendo a diferir solo en la corrupcion que en la sangre manifiesta ser sulfurosa, sobre el papel esta sangre deja un color de sepia firme y bastante unida. Estoy convencido que esta maravillosa produccion de la naturaleza analizada propriamente y sobre el lugar mismo, enriqueceria las ciencias con un nuevo ajente químico, y talvez de mucha utilidad.’

“2. In the *Comptes Rendus* for October 6th, 1856, is an account of the same phenomenon by Mr. J. Rossignon, in which it is attributed to the rapid generation of very minute filiform worms, which, on putrefying, develop a red color. The writer states that in many parts of the country, and even in the city of Guatemala itself, the water of streams and ditches becomes tinged with red from this cause, and therefore concludes that the same would produce the more extensive phenomena seen near La Virtud. Without stopping to investigate the facts upon which he bases his views, I will merely say that the description

of the cañon and caves from which flow the *fuentes de sangre*, and which he apparently claims to have visited, is altogether inaccurate,* and must have been dictated either by a high imaginative power, or derived from very vague oral accounts.

“3. From the tint of the red color, I was at first inclined to believe that it might result from the generation of sulphocyanide of ammonium during the putrefaction of the animal excretions, and the reaction of that substance with a trace of iron in the water percolating through the sandstone. But Mr. W. J. Taylor, to whom I submitted some of the solid matter collected, as also the semi-fluid preserved in alcohol, writes me that he can not detect any iron in the red solution, and that it appears to be entirely an organic coloring matter. The solid material consists of sulphates of ammonia and potash, and an insoluble black substance, thus being precisely similar to the inspissated bitumen-like bat excrement found by me in a cave near Las Piedras, but which, as the cave is dry, has there accumulated, forming a large bed, and contains large and beautiful crystals of sulphate of potash and ammonia.

“4. The insoluble substance has been found by Dr. Leidy to consist chiefly of chitine, undigested fragments of insects, mingled with bat’s hair and homogeneous granular matter.”

* “‘Memoire sur la composition d’un liquide coloré, qui se forme dans une grotte du village de La Virtud, et donne naissance à un petit filet d’eau connu sous le nom de rivière du sang (Rio de Sangre), près de Choluteca (Amerique Centrale); par M. J. Rossignon.

“‘Le liquide sort d’une grotte formée de pierres trachytiques. Il est, au moment de sa formation, d’un rouge vif analogue au sang des mammifères. Il n’a pas d’odeur; sa saveur est presque nulle; sa densité est de 2.75. A quelques pas de la grotte il commence à se décomposer, exhalant une odeur de chair pourrie, et donnant lieu à un dégagement de gaz ou l’acide carbonique domine.’ The reader can judge of the credit to be given to this author, from the happy geographical attempt to connect Virtud with Choluteca !”

C.

(Note to Chapter XXVII.)

POLITICAL CONDITION OF THE BAY ISLANDS.

The discussion between the American and British governments on the question of the Bay Islands, alluded to in the text, although conducted with signal ability on both sides, did not result in any approach to a settlement of the issue which had been broadly raised between the two countries. On the contrary, owing in part to the delinquency of the British minister in Washington, in neglecting to lay certain important propositions intrusted to his hands before the American government, and in part to the excitement caused by what was known as "the Enlistment Question," the controversy regarding the Bay Islands and Central America in general began to assume a threatening shape. Great Britain hastily augmented her naval forces on the West India station, and her example was promptly followed by the United States, and for a while the peace of the two countries hung on the discretion of a score of naval commanders, acting under instructions necessarily vague and indefinite.

At this critical moment, Don Victor Herran made his appearance in London as representative of the Republic of Honduras. He took the ground that the question at issue was one in which the interest of Honduras was paramount; and he asked the surrender of the Bay Islands, primarily as a measure of right and of justice to that republic, and secondarily as a means of solving honorably an aggravated and dangerous question between the United States and Great Britain, upon which each had committed itself beyond the power of receding. This solution was regarded with favor by both parties, and negotiations were accordingly set on foot, which resulted in the signature, on the 27th of August, 1856, of two conventions between Great Britain and Honduras, the first of which provided

I. "That, taking into consideration the petular topographical position of Honduras, and in order to secure the neutrality of the islands adjacent thereto, with reference to any railway or

other line of inter-oceanic communication which may be constructed across the territories of Honduras, her Britannic majesty and the Republic of Honduras agree to constitute and declare the islands of Roatan, Bonacca, etc., a free territory, under the sovereignty of Honduras."

II. That all authority, executive and judicial, exercised under the warrant constituting these islands a colony of the British crown, shall terminate six months after the proclamation of the convention.

III. The inhabitants of the islands, however, to possess the following rights and immunities: 1st, Trial by jury in their own courts; 2d, To govern themselves through the means of legislative, executive, and judicial officers of their own election; 3d, Freedom of religious worship, public and private; 4th, Free trade, and exemption from taxation, except imposed by themselves for their own benefit; and, 5th, Exemption from military service, except for their own defense.

IV. The government of Honduras agrees to exercise no authority in violation of the above reservations; neither to erect, or permit to be erected, any fortifications in the islands; never to cede away or relinquish her sovereignty over them, or any of them; and, finally, that, "as slavery has not existed in the islands, it shall not hereafter be permitted to exist therein."

The second convention terminated all pretensions on behalf of the so-called Mosquito king within the territories claimed by Honduras, and provided for concentrating any Mosquito Indians, if such were found to exist, within a certain limited and convenient district, over which they should enjoy only possessory rights, subject to the sovereignty of Honduras. The provisions of this convention were to be carried out by a joint commission, which should at the same time act as a board of arbitration for the settlement of all claims and differences, of whatsoever nature, then existing between the two governments.

The insertion of the clause in the first convention regarding slavery was supererogatory, since slavery did not exist, nor was it likely to be established in Honduras. It was impolitic, as likely to excite opposition and provoke hostility to the adjustment in the United States. It was unavailing for any practical

purpose, since neither Honduras nor Great Britain could expect to determine the political or social status of the islands forever. And, while there is good reason for believing that the British government inserted this clause, as well as other reservations in the convention, more for the purpose of disarming the opposition of that large part of the British public, always hostile to any relinquishment of territory, however acquired, over which the English flag has once floated, by depriving it of any strong ground of attack, still there were men in England itself who regarded the clause as designed by its framers expressly to defeat the convention and to prevent the cession, by making the whole proceeding obnoxious to the United States. Apart from the improbability of such serious trifling on the part of a great government, this hypothesis is invalidated by the fact that the assent of the United States was in no way required to the completion of the act of cession in the form agreed upon by the English commissioner and the sovereign state of Honduras. It is true, that in the *projet* of a convention between the United States and Great Britain, subsequently agreed upon between the American minister, Mr. Dallas, and Lord Clarendon, a provision was inserted for the joint recognition of the convention of cession, which excited opposition in the American Senate, and which was stricken out by that body. Still, had Honduras ratified the convention of cession, this act of the Senate could have in no way invalidated or set aside its stipulations as to the establishment of slavery, or in any other respect.

The two conventions above referred to, with a general treaty of amity and commerce, to which was appended an article guaranteeing the neutrality of the proposed inter-oceanic railway through Honduras, were sent to Honduras for ratification by the Legislative Assembly of that state, at its annual session in February, 1857. The treaty was ratified without change, but the committee to which the conventions were referred, while approving the general principles on which they were founded, nevertheless objected to some of their details, and recommended that they should be returned to the Honduras minister in London, with instructions to him to solicit the modifications de-

sired without delay. This recommendation was followed out by the executive of the republic, but the result has not yet been made public. The provision as regards slavery, it is worthy of remark, was not among those objected to by the Honduras Legislature; on the contrary, there is every reason for believing that it was not only acquiesced in, but cordially approved.

Pending, therefore, the modification and ratification of the convention of cession, the Bay Islands remain under the sovereignty and authority of the British crown, governed directly by the Superintendent of Belize as lieutenant of the governor general of Jamaica. It is supposed that the mission of Sir William Gore Ouseley, as queen's commissioner to Central America, has among its objects to hasten the preliminaries of cession; and meantime, it would seem, the government of the United States has determined to abstain from the further discussion of British rights in the islands, as equally from opposing their occupation by Great Britain, on the ground that the convention of 1850 is thereby violated. The presumptions are altogether in favor of their restoration to Honduras on terms substantially the same with those of the convention of 1856, and which, however they may appear to fetter the sovereignty of Honduras, are nevertheless in the interests of humanity and civilization.

D.

(Note to Chapter XXVIII.)

ATTEMPTS ON THE MOSQUITO SHORE.

Early in the eighteenth century there existed a strong disposition on the part of the British government and people to encroach upon the Spanish dominions in the New World, and especially on the parts adjacent to the Central American isthmus. Many plans were submitted to the government whereby rich countries might be detached from the Spanish crown, and control obtained of the routes of communication between the oceans. Most of these seem to have been referred to the governors of

Jamaica, and the naval commanders in the Sea of the Antilles ; and a number, of considerable interest, as illustrating the tendencies of the time, and showing the origin of modern pretensions, are preserved among the papers of Admirals Vernon and Wager, now in the possession of that enlightened collector of original historical data, Colonel Peter Force, of Washington. Among them are the original letters of Robert Hodgson to Governor Trelawney, referred to in the text. The first of these is dated "Sandy Bay, April 8, 1740." It commences as follows :

"*May it please your Excellency*, — I arrived at St. Andrew's on the 4th of March, and sailed for Sandy Bay on the 8th, where I arrived on the 11th, but was prevented by a north-er from going on shore till the 13th.

"King Edward, being informed of my arrival, sent me word that he would see me next day, which he did, attended by several of his captains. I read to him your excellency's letter, and my own commission ; and when I had explained them by an interpreter, I told them my errand, and recommended to them to seek all opportunities of cultivating friendship and union with the neighboring Indian nations, and especially such as were under subjection to the Spaniards, and of helping them to recover their freedom. They approved every thing I said, and appointed the 16th to meet the Governor John Briton and his captains at the same place, to hear what I had further to say.

"On the 16th they all came except Admiral Dilly and Colonel Morgan, who were, like General Hobby and his captains, at too great a distance to be sent for ; but their presence not being material, I proceeded to explain to them that, as they had long acknowledged themselves subjects of Great Britain, the Governor of Jamaica had sent me to take possession of their country in his majesty's name ; then asked if they had any thing to object. They answered they had nothing to say against it, but were very glad I had come for that purpose ; so I immediately set up the standard, and reducing what I had said into articles, I asked them, both jointly and separately, if they approved and would abide by them. They unanimously declared they would. I had them then read over again, in solemn manner, under the colors, and at the end of every article fired a gun, and con-

cluded by cutting up a turf, and promising to defend their country, and procure for them all assistance from England in my power.

“The formality with which all this was done seems to have had a good effect upon them.

“The articles I inclose, and hope your excellency will excuse so much ceremony, for, as I had no certain information whether the country was ever taken possession of before, or ever claimed otherwise than by sending them down commissions, I thought the more voluntary and clear the cession was, the better. * * * * The king is very young, I believe not twenty, and is not much observed; but was he to be in England or Jamaica a while, *it is thought he would make a hopeful monarch enough.*

“On the 18th, the king, with his captains, came of their own accord, to consult about a proper plan to attack [the Spaniards]; but, hearing that Captain Jumper was expected from the other side of the Cape, and neither the governor, Admiral Dilly, nor Colonel Morgan being present, I thought it best to defer it till they were summoned. The king brought his mother, and the captains their wives. I entertained them as usual, but there always comes such a train, *that I should have had three or four instead of one puncheon of rum.*” * * *

Hodgson then goes on to describe the appearance of one Andrew Stewart, a pirate, to whom the Indians had made a promise of assistance, from which he endeavored to dissuade them, in order to accompany him; but the Indians finally agreed to attack the River Cocelejo to oblige Stewart, and San Juan de Veragua to oblige Hodgson.

“They intoxicate themselves with a liquor made of honey, pine-apple, and cassada, and if they avoid quarrels, which often happen, they are sure to have fine promiscuous doings among the girls. The old women, I am told, have the liberty of chewing the cassada before it is put in, that they may have a chance in the general rape as well as the young ones.

“I fell into one of their drunken bouts by accident yesterday, when I found Admiral Dilly and Colonel Morgan retailing my advice to them to little effect, for most of them were too drunk to mind it, and so hideously painted that I quickly left them to

avoid being daubed all over, which is the compliment they usually pay visitors on such occasions.

* * * "Their resentment of adultery has lost its edge too much among them, which I have no doubt they are obliged to us for, as also for the breach of promise in their bargains. * * They will loll in their hammocks until they are almost starved, then start up and go a turtling in a pet; and if they have not immediate success, and there happens to be many boats together, they form a design upon some Spanish or Indian town. * * *

"The country is fine, and produces good cotton, better than Jamaica. * * * These Indians on this side do not appear so averse to government as I supposed, and those on the other are tractable enough. * * * I don't take their number to be so great as the author of the project makes them out.

"(Signed), ROBERT HODGSON."

Another letter from Hodgson to Governor Trelawney, dated "Chiriqui Lagoon, near Boca del Drago, June 21st, 1740," gives an account of his expedition to that point. He mentions stopping at the mouth of the River San Juan, and continues:

"There is a castle three days up the river, which I proposed attacking, and a fortified key above it, which, if we had taken, we might have gone to Grenada and Leon. But the Mosquito men were so averse to it, that they declared, if I would not let them go on in their own way, and make slaves of the Spanish Indians, they would proceed no further."

He describes the Indians on the coast of Costa Rica as brave, and affirms that "the Mosquitos are very afraid of them." The Indian tribes on that coast he enumerates: "the Blancos, the Sienobos, Tribees, Sangunas, Telaskees, and Cocos—the last said to have tails. Next are the Valientes, who extend almost to Coccelees." He asks for twelve "blank commissions for the chiefs," and earnestly solicits a body-guard, as his "life is in more danger from these Indians than from the Spaniards."

Among the papers of Admiral Wager is a "project for capturing the Spanish possessions in America," which is probably the one referred to by Hodgson in his first letter. It gives a very full account of the resources and value of Central America,

and explains how it could be subjugated, great stress being laid on the policy of "stirring up the Indians." It concludes:

"If the aforementioned province of Guatemala was but once in the hands of the English, of course the great kingdom of Mexico, California, and so forth, must fall under the same power. * * * This will not be the only inducement, for this country will afford a better means of transporting goods, negro slaves, etc., across the continent than Panama."

Another written project also exists among these papers, entitled, "*A Plan for taking possession of the Spanish Main.*" It recommends, among other things, "to make a settlement at Black or Cape (Segovia) Rivers, to facilitate new passages to the South Seas, and to take possession of Roatan Island, which would greatly affect the Spaniards." On the back of this plan is a "memorandum" in Admiral Wager's own hand:

"The number of English settled in Honduras is between 400 and 500. They have no regular fortifications. The Spaniards do not meddle with them on the shore, but often at sea. The people of Roatan carry on a very considerable trade with them, and from hence their logwood is carried to Holland."

Still another plan, by a person named William Lea, appears among the papers in question, dated "London, March 3d, 1740." It does not state to whom addressed.

"HONORED SIR,—Some time in the year 1736, I laid before your honor and Sir Robert Walpole an account of the province of Guatemala, in New Spain, its situation, products, and trade, together with a draught (corrected from the best observations which I could possibly make during four years' residence there as chief factor to the South Sea Company) of the whole country, with the coasts, harbors, and rivers, both on the North and South Seas, and a plan of the easiest and most practicable mode of reducing the same under the power of Great Britain, in case of a war with Spain.

"I take the liberty to lay before you the following proposal:

"That a number of forces now at Jamaica, not less than 2000 men, to be double officered, to be stationed under command of a governor at Sandy Bay, on the Mosquito Shore,

which is well known to be the healthiest part of this portion of America, being excellently well supplied with turtle, manatee, and a great variety of fish and fowl, for the more convenient undertaking of several expeditions on that coast, which will tend greatly to the advantage of Great Britain, at an easy expense.

“That the first attempt be made up the Lake of Nicaragua, which is to the southward of the Mosquito Shore (where the troops are to be quartered), at the head of which lake is an island, fortified, which commands the channel of the lake. That a number of our own troops, with a greater number of Mosquito Indians, be sent up in piraguas or flat-bottomed boats. * * * The first-named communication will be opened with Grenada, Leon, and other great cities of the interior. * * It is proposed to take only such money as belongs to the king, and not to molest the inhabitants, which will be a means to reconcile them to the English government. * * * But in case the Spaniards should be obstinate, it would then be advisable to encourage the Indians in their aversion to the Spanish government, and to make all possible use of their assistance; and it is not to be doubted but that, if they were supplied with a sufficient quantity of small arms, etc., a great number would gladly join the English. * * *

“(Signed),

WM. LEA.”

In addition to the papers of Admirals Vernon and Wager, there are in possession of Mr. Force a series of original memoranda, etc., in the handwriting of George Chalmers, drawn up by him for the use of the Board of Trade, of which he was secretary. They throw much light on the origin and nature of the British relations with Belize (British Honduras) and the Mosquito Shore.

“MEMORANDA.

“1. It does not appear that the Board of Trade ever affixed any specific boundaries to the Bay of Honduras, to the Bay of Campeachy, or to the Mosquito Shore, or that any other than the foregoing general descriptions were ever affixed to the sites of logwood-cutting until the treaty of 1783. Article 3 particu-

larly established the boundaries of the districts where the British subjects should in future exercise the privilege of logwood-cutting, and the Spanish and American boundaries are pointed out in Art. 2 of the treaty of 1783, upon which the Board of Trade could make no commentary.

“2. It does not appear that the Board of Trade ever insisted for the rights of sovereignty over Honduras (Belize), Campeachy, or the Mosquito Shore, except very faintly indeed, in their report of the 25th of September, 1717, but only the right of logwood-cutting. And the treaty of 1763, Art. 17, which is confirmed and invigorated by the treaty of 1783, clearly establishes this distinction; the one sovereign agreeing thereby to demolish all fortifications, and the other, in the same manner, not to molest the logwood-cutters in cutting and carrying away logwood.

“3. It does not appear what encouragement was held out to British settlers on the Mosquito Shore, or what encouragement could be offered for the purpose of settlement; for, under the treaty of 1763, the British subjects were allowed to build and occupy houses and magazines necessary for the purpose of cutting and carrying away logwood; and under the treaty, British subjects could not claim any other right of ownership than that of cutting logwood, and occupying houses for this special purpose. But it appears that Governor Lyttleton (Governor of Jamaica) wrote to Secretary Conway, in January, 1766, that the settlers at Honduras and Mosquito Shore had applied to him for a civil government, but that, considering the treaty of 1763, Art. 17, whereby all sovereignty over the country had been virtually renounced, he had declined to comply without orders, particularly as his commission gave him no authority. Secretary Conway referred this letter to the Board of Trade for their opinion. The Board asked the opinion of Dr. Marriot, the advocate general, how far, under the treaty of 1763, any settlement could be made and jurisdiction affirmed. It does not appear from the books that Dr. Marriot ever gave any opinion on the point, nor does it appear that the Board of Trade ever made any report on Secretary Conway's reference. But it appears that the logwood-cutters did, in fact, form a colony from the moment that the king relinquished his forts on the Spanish Main and

withdrew his troops. They, in fact, established a government for themselves, *sometimes in opposition to the proclamations of the Governor of Jamaica*, and sometimes in concert with him. The logwood-cutters went so far as to purchase a large territory of the King of Mosquitos, without regarding the treaty of 1763, without attending to the law of England, and without caring whether they involved Great Britain in a war with Spain.

"In April, 1779, Mr. Jackson, as counsel to the Board of Trade, gave it as his opinion that the Mosquito Shore was no continental colony within the contemplation of the Acts of Trade, but he would not obtrude his opinion as to certain considerations which might arise from importing sugar from the Mosquito Shore. The Board of Trade adopted this opinion, and added that the Mosquito Shore was superintended, dependently, on the island of Jamaica."

To these "Memoranda" are appended chronological "Notes," showing the various steps taken, from time to time, by the British crown in respect to this part of the world.

"NOTES.

"1744, *June* 14. The king in council allowed the settlers in Honduras to elect twelve men to make by-laws, according to the laws of England, and to administer justice in a summary way, according to the same laws.

"1773, *April*. Lieutenant Governor Dalling approved of the application of the settlers to elect a council. At this time was laid the first stone of colony.

"1779, *April* 17. Mr. Jackson gave it as his opinion that the Mosquito Shore was no colony or plantation on the American continent, under the Acts of Trade; that there was not at present the principal parts of a government settled at the Mosquito Shore. 'The importing of sugar from here, raised among other questions,' says Mr. Jackson, 'I have no right to obtrude my opinion.'—*Plant. Gen. Bd. W.* 35.

"1779, *May* 4. The Board reported to the Treasury that, though the Mosquito Shore be indisputably part of the great American continent, yet they do not consider it as one or any part of the British colonies thereupon, in the sense of the act

of Parliament (6 Geo.), but *superintended dependently on the island of Jamaica*.—*Plant. Gen. Ent. N.* 519.

“1766, *April* 21. Board apply to Dr. Marriot to know his opinion whether the king could, under the 17th Art. of the peace of 1763, establish any form of government or civil jurisdiction.—*Jour. Ent. O.* 333.

“1766, *January* 15. Governor Lyttleton wrote Secretary Conway that he had been applied to by the settlers at Honduras for a civil government, as Governor Knowles had formerly granted commissions to some persons to act as justices of the peace. But he doubted whether he had any power, considering the 17th Article of Peace, 1763, which relinquished all sovereignty. The fort at Black River was demolished, and the garrison withdrawn. This was referred to the Board of Trade by Secretary Conway, and by the Board to Dr. Marriot for his opinion. But neither Dr. Marriot or the Board seem from the books ever to have given any opinion.

“It does not appear that any governors of Jamaica for the past twenty years gave any account of the Spanish specie introduced in that island by smuggling, etc., etc.

“1744. The tract of land possessed by the Mosquito Indians extends, says Lieutenant Hodgson, upward of eighty leagues on the coast of Honduras, and is commodiously situated for maintaining a correspondence with the logwood-cutters at the River Belize, and for opening a trade with the Spaniards on the continent. There were about fifty British families settled among the Mosquito Indians in 1744.

“1744, *July* 29. Lords of the Privy Council report for the king against a civil government, against an independent company, but that part of the Jamaica regiment might be sent thither—too early to make a regular establishment. A company ordered to be sent out, and Governor Trelawney to lay out the necessary money, for which to draw on the treasury.

“1749. First superintendent.

“1763. A superintendent continued by advice of the Board of Trade.

“1767. Shelburn's commission to Hodgson as superintending agent and commander of the said settlement.

“1744, *May* 3. Report of Lords of Trade about settling a government at Mosquito Shore, and another about a settlement at Ruttan, etc.—*Plant. Genl. G.*, 284.

“1768. This revoked by Lord Hillsborough.

“1777. Lord George Germaine’s letter disapproving of the Superintendent’s considering this as a settlement.

“1670, *July* 18. Treaty with Spain. According to Article 7, England shall enjoy in full right all countries, islands, or colonies then possessed by her subjects. Article 9. Subjects on both sides shall forbear sailing or trading to any places under the dominion of the other, without license.

“1680, *June* 10. Treaty confirmed expressly, as well as that of 1667. Guaranty, if either be attacked in his American dominions, the other shall defend them.

“1713, *May* 13. The [king] to contract for furnishing the Spanish colonies 4000 negroes a year for 30 years. The [colonists] may hold some small parcel of land on the River Platte for their negroes.

“1713, *July* 13. Great Britain guarantees the Spanish American dominions, which shall not be pledged or transferred. Navigation and trade to be as in time of Charles II., late King of Spain. The subjects of both shall enjoy, in all countries and places, the same liberties as are enjoyed by the most favored people. Former treaties, affirming friendship, confederation, and commerce confirmed. Same by treaties of 1713, 1715, 1721. By the latter the King of Great Britain engages to give fresh orders, when demanded, for every thing stipulated in Treaty of Utrecht, which mentions the leaving of the Spaniards the free commerce and navigation with the West Indies, and the maintaining the ancient limits in America as they were in the time of Charles II. of Spain,” etc., etc.

Chalmers reproduces the Report of the Lords of Trade on the question of a superintendent on the Mosquito Shore. It is as follows :

Report of Lords of Trade on Superintendent on Mosquito Shore, Dec. 2, 1763.—Plant. Gen. M., p. 311.

“The Lords of Trade, in consequence of Lord Halifax’s letter, dated 12th November last, reported that it was expedient for his majesty’s service and the national interests that a superintendent should be continued by his majesty upon the Mosquito Shore, where a considerable number of his majesty’s subjects are established, and who, we think, can not, consistently with propriety, be left without some person to preside over them. Such an officer, having proper instructions to correspond directly with this board, will be able to furnish many material lights with respect to the state of these settlements in every particular; and the authority which he will derive from his majesty’s commission will enable him to retain and secure the affections and interests of the Indians inhabiting that Shore, and prevent any thing which may tend to disturb the public peace, either from the inveterate hatred of these Indians to the Spaniards, or the irregular and disorderly disposition of the inhabitants themselves.

(Signed),

HILLSBOROUGH,
ED. ELLIOT,
ED. BARON,
GEO. RICE,
BARNB. GASCOYNE.”

The subjoined additional “Note” on the number of the Mosquito Indians and the treaties with Spain also occur among Chalmers’s papers.

“NOTE.

“The present number of the Mosquito Indians is unknown. It happened among them, probably, as among the North American Indians, that they declined in numbers and degenerated in spirit in proportion nearly as the white people settled among them. The Mosquito Indians, like the Caribs of Domingo, consist of three distinct races: the aborigines, the descendants of certain African negroes who were formerly wrecked on their coasts, and a generation containing the blood of both. If the Spaniards earnestly desired to destroy them, they could not, I

B B B

think, make a very vigorous resistance. They are chiefly defended by the rivers, morasses, and woods of the country, and perhaps still more by the diseases incident to the climate.

“The extent of country for cutting logwood, as stipulated by Lord Caermarthen’s convention, is not so great as it was before the war; for by the definitive treaty of 1763, Article 17, his majesty having agreed to demolish the fortifications that had been erected in the Bay of Honduras, and other places of the territory of Spain in that part of the world, the Catholic king promised, under no pretense, to hinder the British subjects in the said places from cutting and carrying away logwood. The Mosquito Shore and some other neighboring countries were plainly included by these words in the treaty of 1763, but are expressly excluded from the late convention. This last, however, has a great advantage over the former, in having definite boundaries expressed, which necessarily tend to prevent those jealousies and disputes which uncertainties never fail to create.

“But the convention has extended the assigned country of logwooding along the coast (about 80 leagues) upward of 250 miles beyond the limits of the treaty of 1783.

“We have more extensive rights under treaties and the law of nations than ever, viz., the right of cutting other woods, of fishing, etc.; for we had, under the treaty, no more than the naked right of cutting and carrying away logwood. The country seems sufficiently extensive for cutting the supply of logwood equal to the demand.”

It only remains to notice the character of the negotiations which took place between England and Spain, in 1757, in respect to the Mosquito Shore. On the 23d of August of that year, Pitt, afterward Earl Chatham, then primate of England, addressed a dispatch to Sir Benjamin Keene, British ambassador at the court of Spain, upon the relations between the two countries, with the view to a better understanding and a joint opposition to the policy of France. This dispatch seems to have been framed with great care and deliberation; and, in order to give it “due precision and clearness,” Mr. Pitt incloses a *cabinet minute*, which, he adds, “is unanimously approved by

all his majesty's servants consulted in his most secret affairs." This *minute* concludes with the following paragraph :

" Their lordships are further of opinion that satisfaction should be given to Spain on the complaints touching the establishment made by the subjects of England on the Mosquito Shore and in the Bay of Honduras since the treaty of Aix la Chapelle in October, 1748, *in order that all establishments so made shall be evacuated.*"

In another part of the dispatch, it appears that M. D'Abreu, Spanish minister in England, had pressed this subject in several memorials upon the attention of the British government, for Mr. Pitt says that in his "last memorial on the subject he had expressly given to understand that his court would, for the present, content themselves with the evacuation of the Mosquito Shore and the recent establishments in the Bay of Honduras."

Mr. Keene, under date of Madrid, September 26, 1757, replies that he had introduced the subject here adverted to to Mr. Wall, principal minister to the King of Spain, "who," he says, "ran out pretty largely upon what he called our usurpations in America, and did not spare his minister, D'Abreu, for soliciting an answer to his memorial on that subject, which, he said, ought to be left to our choice to give or not." Mr. Keene adds, "I told him that as to that other point of his grief, on what he called the usurpation, I had all the reason imaginable to be persuaded that he would receive satisfaction by the first courier M. D'Abreu dispatched to him." He continues as follows :

"It was here that he again blamed D'Abreu, and entered into a detail of what had happened from the time that he had told me that the king, out of regard to our circumstances with France, was willing to remit those disputed points to a friendly determination between the two courts. 'What had been done by us since that time? Not so much as a memorial answered! What calumny had not been raised against him by the council for agreeing to submit to a discussion matters so evidently the property of the crown of Spain, whose rights had been invalidated by such a concession!' In a word, sir, that I may not be too particular on this point of restrictions, I may collect the whole in presuming *that I believe Spain will endeavor to do*

herself what she calls justice, if she thinks we do not ; for such I take the meaning of Mr. Wall to have been when he let drop the following expressions: 'That on several occasions and epochs, the Spanish governors, in virtue of their usual orders and instructions to defend the territories committed to their charge, had driven the English logwood-cutters and other intruders out of their places of labor and residence, without the imputation of having committed any act of hostility against Great Britain; on the contrary, the two nations had continued in friendship till, in the course of time, by the negligence of the Spanish governors and the artifices of the logwood-cutters, the latter had crept back again to their huts on the rocks and lakes, which gave room to new disputes. That Spain had fourteen vessels of war at sea, and could add six more.'"*

The subjoined paragraph constitutes one of the heads of the Spanish ambassador's memorial of the 28th of October, 1734, addressed to the British cabinet:

"*5th.* That the incursions made by the Carib Indians and Zambos of the Mosquito Shore into the provinces of Honduras and Nicaragua are at the instigation and under the protection of the English of Jamaica, who have a commerce with them, and give them, in exchange for the captive Indians, fire-arms, powder, shot, and other goods, contrary to the natural rights of the people."

E.

(*Note to Chapter XXX.*)

TREATIES GUARANTEEING THE HONDURAS INTER-OCEANIC RAILWAY.

The subjoined article, guaranteeing and protecting the HONDURAS INTER-OCEANIC RAILWAY COMPANY, is appended to, and constitutes a part of the "*Treaty of Friendship, Commerce, and Navigation between Great Britain and the Republic of Honduras,*" signed by the Earl of Clarendon, her majesty's principal Secretary of State, on behalf of Great Britain, and Señor

* Correspondence of the Earl of Chatham, London, 1840, p. 249-256.

Don Victor Herran, Minister Plenipotentiary of Honduras, and dated the 26th day of August, 1856. It is also incorporated, word for word, in the treaty between France and Honduras, signed in Paris on the 28th of July, 1857. It has also been appended to the *projet* of a treaty submitted by the government of Honduras to that of the United States, by which it will, without doubt, be accepted. The charter of the company binds the government of Honduras to incorporate this article, word for word, in all the treaties which it may enter into with other nations.

“ ADDITIONAL ARTICLE.

“ Inasmuch as a contract was entered into by the government of Honduras and a company entitled the ‘ Honduras Inter-oceanic Railway Company ’ for the construction of a railway from the Atlantic to the Pacific Oceans, through the territories of Honduras, which contract was ratified by the constitutional powers of the state, and proclaimed as a law on the 28th day of April, 1854; and inasmuch as, by the terms of Art. 4, section 6 of said contract, the ‘ government of Honduras, with the view to secure the route herein contemplated from all interruption and disturbance from any cause or under any circumstances, engages to open negotiations with the various governments with which it may have relations, for their separate recognition of the perpetual neutrality, and for the protection of the aforesaid route; ’ therefore, to carry out the obligations thus incurred,

“ 1. The government of Honduras agrees that the right of way or transit over such route or road, or any other that may be constructed within its territories, from sea to sea, shall be at all times open and free to the government and subjects of Great Britain, for all lawful purposes whatever. No tolls, duties, or charges of any kind shall be imposed by the government of Honduras on the transit of property belonging to the government of Great Britain, or on the public mails sent under authority of the same, nor on the subjects of the British crown; and all lawful produce, manufactures, merchandise, or other property belonging to subjects of Great Britain, passing from one ocean to the other, in either direction, shall be subject to no import or

export duties whatever, nor to any discriminating tolls or charges for conveyance or transit, on any such route or road as aforesaid, and shall be secure and protected from all interruption or detention on the part of the state. The Republic of Honduras further agrees that any other privilege or advantage, commercial or other, which is or may be granted to the subjects or citizens of any other country, in regard to such route or road as aforesaid, shall also, and at the same time, be extended to British subjects; and finally, as an evidence of its disposition to accord to the travel and commerce of the world all the advantages resulting from its position in respect to the two great oceans, Honduras, of her own good-will, engages to establish the ports at the extremities of the contemplated road as free ports, for all the purposes of commerce and trade.

“2. In consideration of these concessions, in order to secure the construction and permanence of the route or road herein contemplated, and also to secure for the benefit of mankind the uninterrupted advantages of such communication from sea to sea, Great Britain recognizes the rights of sovereignty and property of Honduras in and over the line of said road, and for the same reason guarantees positively and efficaciously the entire neutrality of the same, so long as Great Britain shall enjoy the privileges conceded to it in the preceding section of this article. And when the proposed road shall have been completed, Great Britain equally engages, in conjunction with Honduras, to protect the same from interruption, seizure, or unjust confiscation, from whatsoever quarter the attempt may proceed.

“3. Nevertheless, her Britannic majesty, in according her protection to the said route or road, and guaranteeing its neutrality and security when completed, always understands that this protection and guarantee are granted conditionally, and may be withdrawn by her if she should deem that the persons or company undertaking or managing the same adopt or establish such regulations concerning the traffic thereupon as are contrary to the spirit and intention of this article, either by making unfair discriminations in favor of the commerce of any nation or nations over the commerce of any other nation or nations, or by imposing oppressive exactions or unreasonable tolls upon passengers,

vessels, goods, wares, merchandise, or other articles. The aforesaid protection and guarantee shall not, however, be withdrawn by her Britannic majesty without first giving six months' notice to the Republic of Honduras.

“4. The present additional article shall have the same force and validity as if it were inserted, word for word, in the treaty of friendship, commerce, and navigation signed this day. It shall be ratified, and the ratifications shall be exchanged at the same time; and its stipulations, subject to the condition of notice on the part of her Britannic majesty provided for in the preceding paragraph of this article, shall be permanent between the contracting parties.”

F.

THERMOMETRICAL AND BAROMETRICAL OBSERVATIONS—1853.

Place.	Date.	6 A.M.			12 M.			3 P.M.			6 P.M.		
		Barom.	Ther.	Wind.	Barom.	Ther.	Wind.	Barom.	Ther.	Wind.	Barom.	Ther.	Wind.
Cómayagua.	April 24	28.111 77.		N.	28.090 85.		N.	28.040 84.		N.	28.040 81.		N.
"	25	28.100 77.			28.125 82.		N.	28.056 83.		N.	28.040 81.		N.
"	26	28.155 75.			28.138 80.5			28.059 83.5		N.	28.096 79.5		N.
"	27	28.162 76.5		N.	28.135 82.5		N.	28.069 84.5		N.			
"	28	28.149 75.			28.157 78.5		N.	28.080 84.		N.			
"	29	28.159 75.		N.	28.120 82.		N.	28.161 85.		N.			
"	30	28.122 75.		N.	28.061 83.		N.	28.019 84.		N.			
"	May 1	28.074 75.		N.	28.032 84.5		N.	28.009 86.		N.			
"	7						N.	28.050		N.			
"	8	28.050 74.		N.			N.E.	28.068 75.		N.E.	28.115 76.		N.
"	9	28.100 71.5		N.	28.095 80.5		N.E.	28.060 81.		N.			
"	10	28.140 73.5		N.	28.145 85.								
"	11	28.155 74.5		N.	28.158 80.		N.	28.100 81.5		N.			
"	12	28.160 73.		N.	28.165 80.5		N.	28.105 82.5		N.			
"	13	28.161 75.5		N.N.W.	28.159 81.		N.N.W.	28.085 78.5		N.N.E.			
"	14	28.135 75.		N.	28.130 80.5		N.						
"	16	28.080 75.											
"	17	28.100 73.			28.100 78.		N.W.	28.065 76.					
"	18	28.131 73.											
"	19	28.165 74.		N.	28.195 80.		N.						
"	25	28.225 70.5		N.	28.220 79.5		N.W.	28.144 81.5		N.W.			
"	26	28.210 73.5		N.									
"	27							28.151 81.		N.			

"	29	28.225	76.5	N.	2	28.160 81.	S.E.	2	28.140 81.5	S.E.	2	28.112 79.	N.W.	3
"	June 1					28.180 78.5	N.E.	1						
"	3	28.200	74.5	N.N.W.	1									
"	4	28.161	74.5	N.N.W.										
"	5	27.890	76.	N.	1	27.880 81.5	N.	4	28.105 79.5	N.N.W.	2	28.110 78.5	N.N.W.	1
"	6	27.900	77.	N.	4							27.825 82.	N.	3
"	7	27.910	74.											
"	8	27.910	75.											
"	9	27.910	74.25			27.920 77.	N.	2	27.860 83.5	N.	2			
"	10	27.910	74.25			27.920 77.	N.	1	27.850 85.5	N.	5			
"	11	27.890	75.			27.880 75.			27.920 77.			27.880 76.		
"	12	27.850	74.			27.825 79.			27.850 80.	N.	3			
"	13	27.850	74.						27.880 79.75	N.	5	27.800 76.		
"	14	27.870	75.									27.800 78.		
"	15	27.850	73.			27.870 77.5						27.800 79.		
"	16	27.850	74.			27.850 77.	S.	3				27.78 79.		
"	17	27.850	76.5	S.	4	27.83 79.	S.	4				27.850 77.		
"	18	27.900	74.	N.		27.850 77.	S.					27.890 79.		
"	19					27.900 79.3			27.890 82.					
"	20	27.860	74.5											
"	21	27.910	74.75											
"	22	27.900	73.75											
"	23	27.920	76.			27.920 78.								
"	24	27.890	76.			27.960 79.75								
"	25	27.880	74.5			27.900 76.								
"	26	27.800	74.											
"	27	27.900	74.5											
"	28	27.880	73.											
"	29	27.860	73.											
"	30	27.900	74.5			27.600 86.	N.	2						

THERMOMETRICAL AND BAROMETRICAL OBSERVATIONS—1853.—(Continued.)

Place.	Date.	6 A.M.		12 M.		3 P.M.		
		Barom.	Ther.	Barom.	Ther.	Barom.	Ther.	Wind.
Santa Rosa.	July 10	26.170	67.5	26.210		26.220	72.	N.
"	11	26.250	68.			26.250	73.	
"	12	26.230	68.	26.200	72.5			
"	13	26.210	67.	26.210	72.5			
"	14	26.200	70.			26.200	75.	
"	15	26.200	68.	26.200	71.5			
"	16	26.200	68.			26.150	72.5	
"	17	26.151	68.			26.150	74.	
"	18	26.200	68.					
San Salvador.	Aug. 11	27.60	70.					
"	12	27.575	71.	27.600	79.			79.
"	13	27.590	76.	27.600	75.	27.550		
"	14	27.580	74.	27.550	78.			
"	15	27.570	73.	27.571	80.			
"	16	27.570	74.					
"	17	27.580	74.	27.550	80.			
"	18	27.570	74.					
"	19	27.590	75.					
"	20	27.580	75.			27.550	82.	
"	21	27.570	76.					
"	22	27.560	76.	27.570	81.			
"	23			27.570	78.			
"	24	27.57	74.					
"	25	27.56	76.					
"	27	27.60	76.					
"	28	27.56	76.					

METEOROLOGICAL OBSERVATIONS AT THE BAY OF FONSECA (PORT OF AMAPALA, LAT. 13° 8', LON. 87° 34'), FOR
THE MONTHS OF MAY, JUNE, AND JULY, 1857. BY LIEUTENANT W. N. JEFFERS, U. S. N.

Date.	7 A. M.				2 P. M.				9 P. M.				Observations.
	Barom.	Ther.	Wind.	F.	Barom.	Ther.	Wind.	F.	Barom.	Ther.	Wind.	F.	
May 3	30.005	81.	N.E.	1	30.050	86.	C.		29.970	81.	N.E.	4	Rained a little at 2 A.M.
4	30.025	79.	N.E.	2					29.960	82.	N.E.	2	Very heavy rain from 9 A.M. to 4 P.M.
5	30.085	77.5	N.	1	29.960	84.5	S.	3	30.030	80.			Rain at intervals.
6	30.000	79.	C.		29.930	87.	S.	3	30.000	83.	N.E.	1	Showers at intervals from 7 P.M. to 2 A.M.
7	30.072	76.	N.	1	29.960	87.5	S.		30.050	83.	N.E.	1	Showers at intervals from 9 P.M. to 2 A.M.
8	30.055	78.	N.E.	1	30.015	92.	S.	1	30.070	84.	N.E.	1	A shower at 10 P.M.
9	30.180	81.	N.	1	30.010	92.	S.	1	30.070	83.	S.	1	Remarkably clear all day.
10	30.055	79.	N.E.	2	31.470	89.4	W.S.W.	1	30.154	83.1	C.		Remarkably clear all day; night still and clear;
11													no rain.
12	30.162	78.5	W.	1	29.940	88.	S.W.	2	29.950	80.2	C.		do. do.
13	30.039	78.	E.	1					30.040	83.	C.		do. do.
14	30.027	82.	N.E.	1	29.968	91.5	W.	2	29.943	86.	C.		Very clear day; slight haziness in horizon about mid-day.
15	30.015	84.	E.N.E.		29.990	92.5	S.		29.950	86.	E.		Very warm and clear; a shower at 9 P.M.
16	30.110	83.	N.E.		29.980	91.	S.		30.150	80.	N.E.	6	All day clear until sunset at 7 P.M.
17	30.009	80.	N.E.		29.960	91.	S.		30.060	80.	N.E.		At 5 o'clock overcast, squally, lightning; thunder and rain from 7 to 1.
18	30.010	79.	C.		29.910	81.	E.	1	30.042	78.5	C.	2	Cloudy all day; a little rain at 10 P.M.
19	30.032	79.	N.E.		30.050	83.			30.083	80.	E.		Cloudy, dull day; wind westerly.
20	30.062	77.	N.E.						30.070	81.	C.		Clear morning, cloudy at mid-day, rain at 6 P.M.
21	30.058	76.	C.		30.048	85.	S.W.	2	30.018	78.	C.		Clear; a gentle rain from 5 to 8 A.M.
22	30.010	74.	C.						30.084	75.	C.		Dull all day; raining at 9 P.M.
23	30.067	76.	C.						30.058	81.	C.		Clear during the day.
24	30.090	80.			30.040	86.			30.040				Clear during the day.
25	30.070	81.	Var.		30.047								Cloudy in the morning.
26	30.068	79.	Var.		30.910	85.	S.		30.014	77.	S.		
27	30.010	77.			30.075	85.	S.						

METEOROLOGICAL OBSERVATIONS, ETC.—Continued.

Date.	7 A.M.				3 P.M.				9 P.M.				Observations.
	Barom.	Ther.	Wind.	F.	Barom.	Ther.	Wind.	F.	Barom.	Ther.	Wind.	F.	
May 28	30.067	78.			30.065	83.	S.		29.943	73.	C.		Cloudy during the day.
29	30.190	79.	S.		29.700	84.	S.		30.170	73.	N.E.		Raining during the day.
30	30.090	78.5	N.E.		29.058	77.5	N.E.		29.090	74.	N.E.		Raining the whole day.
31	30.045	75.	N.E.		30.070	78.			30.060	75.			
June 1	30.090	74.	S.E.	1	30.100	85.	S.	3	10	80.	N.E.		
2	30.050	76.	N.E.	1	30.040	85.	S.	3	30.050	79.	S.		Clear and pleasant until 1 P.M., then appearance of a shower.
3	30.065	79.	N.E.	2	30.025	84.	S.	3	30.020				
4	30.110	80.	N.E.	1	30.015	87.	S.	3	30.070	78.	S.	1	Showers from 7 to 12 P.M.; rain all night.
5	30.080	79.	N.E.	2	30.020	88.	S.	2	30.000	77.	N.E.	2	Showers from 7 to 10 P.M.
6	30.040	76.	N.E.	1	29.960	81.	S.	2	30.009	77.	S.	1	Clear all day; at 9 P.M. heavy rain.
7	30.075	79.	N.E.	3	29.970	88.	S.	2		88.	S.E.	4	Heavy rain during the night.
8	29.950	77.	N.E.	1	29.960	87.			29.970	84.			Cloudy; occasional showers.
9	29.980	79.	N.E.	1	29.990	88.			30.020	88.	S.E.	1	At 3 P.M. heavy rain.
10	29.970	80.	N.E.	1	29.950	90.	S.	1	30.009	79.	S.E.	2	Rained at intervals from 4 P.M. until 2 A.M.
11	30.000	78.	N.	1	29.940	87.	S.	1	30.004	79.	S.E.	1	Rained heavily.
12	29.967	77.	N.	2	29.961	87.	S.	3	30.020	79.	S.E.	1	Rained heavily.
13	29.980	77.	N.	2	30.000	84.	S.	4	30.022	77.	N.E.	2	Showers until 1 A.M., then very heavy rain.
14	30.000	76.	N.E.	2	29.950	85.	S.	3	30.120	81.	N.E.		5 P.M. heavy rain, continued until 2 A.M.
15	29.980	77.	N.E.	1					30.060	84.	S.E.	1	7 P.M.; rained during the night.
16	30.000	74.	N.E.	1			N.E.	1	30.050	80.			Clear.
17	30.000	78.	N.E.	1	30.010	87.	S.	3	30.010	82.	S.		Clear.
18	30.075	79.	N.E.	1					30.000	80.			Showers during the night.
19	29.980	79.	N.E.	1	29.960	88.	S.	1	30.000	82.	N.E.	1	
20	29.980	80.	N.E.	1	30.020	88.	S.	2	30.079	80.	N.E.	1	Rain at daylight.
21	30.010	80.			30.140	88.	S.		30.040	80.			At 2 A.M. heavy squall with rain.
22	30.050	79.			30.041	86.			30.060	78.			Heavy showers at 2 P.M.
23	30.057	77.	N.E.	2	30.013	83.	S.		30.000	75.			Clear all day and evening.
24		76.					S.E.		30.040	76.	N.E.	1	Clear.
25	30.020	76.	N.E.	3	29.970	94.	N.E.	6	30.050	74.	N.E.	1	Cloudy; rain in showers at night.
26	30.000	80.	N.E.	1	30.000	94.	N.E.	1	30.100	82.	S.	1	

June 27	31.000	80.	N.E.	2	29.970	91.	S.	3	29.950	80.		1	At 3 P.M. rain.
28	30.000	76.	N.E.	2	29.945	90.	S.E.	1	30.050	74.		1	At 3 P.M. commenced raining.
29	30.000	78.	N.E.	1	29.950	86.	S.	2	30.000	76.		1	At 3 P.M. heavy showers.
July	1	30.000	N.E.	1	29.950	84.	S.	1	30.100	80.			Rain all the evening until 8 o'clock.
2	31.009	78.	N.E.	1	29.960	87.	S.	1	30.008	81.			Occasional showers afternoon and evening.
3	29.980	78.	N.E.	1	29.960	90.	S.	1	29.960	84.		1	Hazy all day and cloudy at night.
4	29.920	79.	N.E.	1	29.870	89.	S.	1	29.980	80.		1	At 3 P.M. heavy rain.
5	29.950	77.	N.E.	1	29.920	88.	S.	1	30.000	78.		1	Rain in the afternoon from S.E.
6	30.000	78.	N.E.	1	30.030	87.	E.	3	30.022	78.			Showers at 2 P.M.
7	30.000	75.	Calm.	1	29.996	89.5	S.	2	30.000	79.			Showers day and night.
8	30.000	80.	N.E.	1	29.780	90.	S.	2	29.950	74.		2	At 6 P.M. showers.
9	30.000	78.	N.E.	1	30.000	89.	S.	1	30.025	78.		1	Clear, but hazy.
10	30.045	80.	N.E.	2	29.980	88.	S.	2	30.065	78.		1	Heavy rain all night.
11	30.034	76.	N.E.	1	30.045	85.	S.	2	30.050	78.		2	Heavy rain.
12	30.035	75.	N.E.	1	30.045	85.	S.	2	30.055	76.			
13	30.020	75.	N.E.	1	30.045	85.	S.	2	30.130	76.			Showers 2 P.M. to 3 A.M.
14	30.120	76.	N.E.	2	30.125	79.			30.045	78.			Heavy rain.
15	30.120	78.	N.E.	2	30.040	87.			30.085	80.			
16	30.050	78.							30.100	80.			
17	30.050	78.							29.085	81.			Clear.
18	30.082	80.			29.050	86.	S.	3	30.075				Rain.
19	30.090	80.			30.050	88.	S.	2	30.100	77.		5	Heavy showers.
20	30.050	78.	N.E.	1	30.020	83.	S.	2	38.085	80.	N.E.		Rain at 5 P.M.
21	30.050	80.	N.E.	2	30.037	86.	S.	3	30.065	80.	N.	2	Rain all night.
22	30.070	77.	N.E.	1	30.075	78.	S.	2	30.040	80.	N.	2	
23	30.035	78.	N.	1	30.004	87.	S.	3					Very heavy rain.
24	29.990	76.	N.	1								2	
25	30.020	78.	N.E.	1	29.965	86.	S.	2	30.040	79.	N.E.		Calm and cloudy all day; rain at night.
26	30.011	78.	S.E.	1	30.003	85.			30.028	80.	Calm.		Raining at night.
27	30.026	78.	N.E.	1	29.995	87.	S.	1	30.080	78.			Showers all night.
28	30.000	76.	N.E.	1	30.041	84.			30.055	78.			
29	30.060	77.	N.	3	30.017	89.	S.	2	30.010	81.	N.E.	1	
30	30.060	79.	N.	1	30.040	90.	S.	1	30.040	80.			Clear all day.
31	30.030	78.	N.	1	30.060	90.			30.070	82.			Clear.

H.

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With liberal hand extends her ample stores."

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